

THIRD FIVE-YEAR REVIEW REPORT

SKINNER LANDFILL SUPERFUND SITE

Butler County West Chester, Ohio

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3/17/09

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Acronyms

ARARs	Applicable or Relevant and	MSL	mean sea level
	Appropriate Requirements	NCP	National Contingency Plan
BCDES	Butler County Department of	NPL	National Priorities List
	Environmental Services	O&M	Operation and Maintenance
bgs	below ground surface	Ohio EPA	Ohio Environmental
C'D	Consent Decree		Protection Agency
CERCLA	Comprehensive	PCBs	Polychlorinated Biphenyls
	Environmental Response,	PCOR	Preliminary Close Out Report
	Compensation, and Liability	POTW	Publicly Owned Treatment
	Act		Works
CFR	Code of Federal Regulations	ppm	parts per million
CQA	Construction Quality	PRPs	Potentially Responsible
	Assurance		Parties
DNAPL	Dense Non Aqueous Phase	RA	Remedial Action
	Liquid	RD	Remedial Design
EPA	United States Environmental	RI	Remedial Investigation
	Protection Agency	RI/FS	Remedial Investigation/
FML	Flexible Geomembrane Liner		Feasibility Study
FS	Feasibility Study	ROD	Record of Decision
GCL	Geosynthetic Clay Liner	Site	Skinner Landfill Superfund
GIS	Groundwater Interception		Site
	System	SVE	Soil Vapor Extraction
gpm	gallons per minute	SVOCs	Semi-Volatile Organic
GWMP	Groundwater Waste		Compounds
	Monitoring Plan	UAO	Unilateral Administrative
			Order
IC	Institutional Control	UECA	Uniform Environmental
L.GP	Low Ground Pressure		Covenants Act
LTPP	Long Term Performance Plan	VOCs	Volatile Organic Compounds
MCL	Maximum Contaminant		
	Level		

Executive Summary

EPA completed the third five-year review of the Skinner Landfill site in West Chester, Ohio, in March 2009. The assessment of this five-year review found that the remedy is protective of human health and the environment. There are no current exposure pathways and the remedy appears to be functioning as designed. The landfill cap, the groundwater interception system (GIS) and the connection of nearby residents to the public water supply eliminate the source of contamination and have achieved the remedial objectives to minimize the migration of contaminants to groundwater and surface water and to prevent direct contact with, or ingestion of, contaminants in soils and sediments. Institutional controls (ICs), in the form of an environmental covenant under the Ohio version of the Uniform Environmental Covenants Act (UECA), have been implemented to protect the remedy components, and to protect against improper use of site land and groundwater resources. Compliance with effective ICs will be ensured through long-term stewardship by implementing, maintaining, monitoring and enforcing effective ICs as well as maintaining the site remedy components. To that end, the current title commitment and site survey map will be reviewed to ensure that the environmental covenant remains effective and long-term stewardship procedures will be reviewed. EPA noted a few deficiencies that do not immediately impact the protectiveness of the remedy.

Both the Health and Safety Plan and the Contingency Plans are in place, sufficient to control risks, and properly implemented. The remedy for the Skinner Landfill Superfund Site (the site) includes a landfill cap/containment, access controls, ICs and a GIS.

The Ohio Environmental Protection Agency (Ohio EPA) in cooperation with the United States Environmental Protection Agency (EPA) completed oversight of all major construction activities for the site.

The site is located approximately 15 miles north of Cincinnati, Ohio, near West Chester, Butler County, Ohio, in Township 3, Section 22, Range 2. The site is comprised of approximately 78 acres of hilly terrain. The site was used in the past for the mining of sand and gravel, and was operated for the landfilling of a wide variety of materials from approximately 1934 through 1990. Materials deposited at the site include demolition debris, household refuse, and a variety of chemical wastes. The site is bordered on the east by a Norfolk Southern Railway Company right-of-way, on the south by the East Fork of Mill Creek, on the north by wooded and agricultural land, and on the west by a gravel driveway and Cincinnati-Dayton Road.

The site achieved construction completion in September 2001. The assessment of this five-year review found that the remedy was constructed in accordance with the requirements of the June 4, 1993, Record of Decision (ROD). The landfill cap has been constructed over all the wastes, a GIS is operating, and a public water supply was provided to nearby residents.

Five-Year Review Summary Form

\$ITE IDENTIFICATION						
Site name (from WasteLAN): Skinner Landfill Superfund Site						
EPA ID (from WasteLAN): EPA ID# OHD063963714						
Region: 5 State: OH City/County: West Chester, Butler County						
SITE STATUS						
NPL status: X Final Deleted Other (specify)						
Remediation status (choose all that apply): Under Construction X Operating						
Complete						
Multiple OUs? YES X NO Construction completion date: 9/27/01						
Has site been put into reuse? YES X NO						
REVIEW STATUS						
Lead agency: X EPA State Tribe Other Federal Agency						
Author name: Scott Hansen						
Author title: Remedial Project Manager Author affiliation: U.S.EPA, Region 5						
Review period: <u>09 / 17 / 2008</u> to <u>March 2009</u>						
Date(s) of site inspection: 01 / 28 / 2009						
Type of review:						
_X Post-SARA Pre-SARA NPL-Removal only						
Non-NPL Remedial Action SiteNPL State/Tribe-lead						
Regional Discretion						
Review number: 1 (first) 2 (second) X 3 (third) Other (specify)						
Triggering action:						
_ Actual RA Onsite Construction at OU # Actual RA Start at OU#_NA X Previous Five-Year Review Report						
Other (specify)						
Triggering action date (from WasteLAN): 03 / 17 / 2004						
Due date (five years after triggering action date): 03 / 17 / 2009						
but date (11.0 years after triggering action date). 05 / 17 / 2002						

Five-Year Review Summary Form, cont'd.

Issues:

- Security measures (site fence repair and control illegal dumping)
- The need for upgradient groundwater control must be evaluated
- Institutional controls: Location of some existing easements and their relationship to remedy components is unknown
- Institutional controls: Ensure long-term stewardship

Recommendations and Follow-up Actions:

- Repair fence where needed and control illegal dumping
- Continued quarterly measurements of groundwater elevations
- Institutional controls: Update title commitment and site survey map; check all easements of record to make sure there is no interference with site remedy components
- Institutional controls: Review long-term stewardship procedures and update if necessary

Protectiveness Statement:

The assessment of this five-year review found that the remedy at the Skinner Landfill Superfund site is protective of human health and the environment. There are no current exposure pathways and the remedy appears to be functioning as designed. The landfill cap, the GIS and the connection of nearby residents to the public water supply eliminate the source of contamination and have achieved the remedial objectives to minimize the migration of contaminants to groundwater and surface water and to prevent direct contact with, or ingestion of, contaminants in soils and sediments. Institutional controls, in the form of an environmental covenant under the Ohio version of the Uniform Environmental Covenants Act, have been implemented to protect the remedy components, and to protect against improper use of site land and groundwater resources. Compliance with effective ICs will be ensured through long-term stewardship by implementing, maintaining, monitoring and enforcing effective ICs as well as maintaining the site remedy components.

1.0 INTRODUCTION

The EPA, Region 5, has conducted a five-year review of the remedial actions implemented at the Skinner Landfill Superfund Site in Butler County, Ohio. The review was conducted between September 2008 and March 2009. This report documents the results of the five-year review. The purpose of five-year reviews is to determine whether the remedy at a site is protective of human health and the environment. The methods, findings, and conclusions of the review are documented in the five-year review reports. In addition, five-year review reports identify issues found during the review, if any, and make recommendations to address them.

This review is required by statute. EPA must implement five-year reviews consistent with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). CERCLA 121(c), as amended, states:

If a remedial action is selected that results in any hazardous substances, pollutants, or contaminants remaining at the site, the remedial action shall be reviewed no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented.

The NCP part 300.430(f)(4)(ii) of the Code of Federal Regulations (CFR) states:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

This is the third five-year review for the Skinner Landfill Site. The first five-year review report was completed and signed in March 1999, and the second report was signed in March 2004. Due to the fact that hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure, this five-year review is required.

2.0 SITE CHRONOLOGY

Table 1. Chronology of Site Events			
Date	Event		
1976	Initial Discovery of Problem		
09/1983	National Priorities List (NPL) Listing		
09/1984 – 06/1993	RI/FS (entire site)		
09/30/1992	Interim ROD		
12/09/1992	Unilateral Administrative Order (UAO)		
06/04/1993	ROD (entire site)		
03/1994 – 06/1996	RD		
06/18/1996	RA start		
04/02/2001	Consent Decree for RA		
04/02/2001	RA construction start		
09/27/2001	Preliminary Close Out Report (PCOR)		
03/27/2003	Final inspection of site		
09/30/2003	RA completed		
03/17/1999	First five-year review		
03/17/2004	Second five-year review		
12/24/2006	Environmental covenant under the UECA recorded in site land records		
12/2006 - 01/2007	Abandoned damaged piezometers and installed new piezometers		
06/2008	Removal action		

3.0 BACKGROUND

3.1 Physical Characteristics

The Skinner Landfill site is located approximately 15 miles north of Cincinnati, Ohio, near West Chester, Butler County, Ohio, in Township 3, Section 22, Range 2. The site is bordered on the east by a Norfolk Southern Railway Company right-of-way, on the south by the East Fork of Mill Creek, on the north by wooded and agricultural land, and on the west by a gravel driveway and Cincinnati-Dayton Road. A map of the site is provided in Attachment 1.

The approximately 10.5-acre landfill site is fenced on all sides with locked access gates on the south and west sides of the site. The only structures on site are the metal electrical box located near the south entrance gate and the gas vents. A gravel access road is located inside the fence on the south and west sides of the site.

The site is located in a highly dissected area that slopes from a till-mantled-bedrock upland to a broad, flat-bottomed valley that is occupied by the main branch of Mill Creek. Elevations on the site range from a high of nearly 800 feet above mean sea level (MSL) in the northeast, to a low of 645 feet above MSL near the confluence of Skinner Creek and the East Fork of Mill Creek. Both Skinner Creek and the East Fork of Mill Creek are small, intermittent shallow streams. Both of these streams flow to the southwest from the site toward Mill Creek, which in turn flows into the Ohio River.

In general, the site is underlain by relatively thin glacial drift over inter-bedded shale and limestone of Ordovician age. The composition of the glacial drift ranges from intermixed silt, sand and gravel, to silty sandy clays with a thickness ranging from zero to over forty feet. The sand and gravel deposits comprise the hills and ridges and are encountered near the surface of the central portion of the site. The silts and clays usually occur as lenses in the sands and gravel or directly overlie bedrock.

3.2 Land and Resource Use

The property was originally developed as a sand and gravel mining operation and was subsequently used as a landfill from 1934 to 1990.

3.3 History of Contamination

In 1976, in response to a fire at the site and reports of observations of a black, oily liquid in a waste lagoon on the site, the Ohio EPA began a site investigation. Before Ohio EPA could complete the investigation, the site owner/operator covered the waste lagoon with a layer of demolition debris, thereby hindering the investigation. Albert Skinner, the site owner at the time, dissuaded the Ohio EPA from accessing the lagoon area by claiming that nerve gas, mustard gas, incendiary bombs, phosphorus, flame throwers, cyanide ash, and other explosive devices were buried at the landfill. This prompted Ohio EPA to request the assistance of the U.S. Army. Albert Skinner, in the presence of Ohio EPA attorneys and the U.S. Army investigators, subsequently retracted his claims of the presence of ordnance. The U.S. Army and Ohio EPA then dug several trenches into the buried waste lagoon, and found black and orange liquids and a number of barrels of waste. Subsequently, the U.S. Army performed records searches; these have indicated that there is no evidence of munitions of any sort having been disposed at the site.

Based on the initial studies, materials deposited at the site include demolition debris, household refuse and a wide variety of chemical wastes. The waste disposal areas include a now buried former waste lagoon near the center of the site and a landfill. The buried lagoon was used for the disposal of paint wastes, ink wastes, creosote, pesticides, and other

chemicals. The landfill area, located north and northeast of the buried lagoon, received predominantly demolition debris.

3.4 Initial Response

In 1982, the EPA conducted a limited site investigation for the purpose of scoring the site for inclusion on the National Priorities List (NPL). The investigation showed that groundwater southeast of the buried waste lagoon was contaminated with volatile organic compounds (VOCs). The site was proposed for the NPL in December 1982.

The EPA completed a search for potentially responsible parties (PRPs) in April 1983. The results of that search were later supplemented by information requests under CERCLA Section 104(e) and by administrative depositions.

In 1986, the EPA began a Phase I Remedial Investigation (RI) with the sampling of groundwater, surface water, and soils. A biological survey of the East Fork of Mill Creek and Skinner Creek was also performed. In 1989, the EPA began its Phase II RI, to further investigate the site groundwater, surface water, soils, and sediments. Overall, more than 400 samples from the site were analyzed. In August 1990, through a legal proceeding, the Ohio EPA closed the site to all further landfilling activities. EPA completed the Phase II RI in May 1991 and both a Baseline Risk Assessment and Feasibility Study (FS) in 1992.

The results of the two-phased RI are summarized below.

The former dump area was used for the disposal of a variety of wastes, including demolition debris, household refuse and assorted scrap. Chemical wastes were also disposed in this area. The total volume of wastes within the former dump was estimated at 120,000 cubic yards. EPA's water samples collected during the Phase I RI indicated that the most concentrated groundwater contamination found at the site was in the area beneath the former dump. Site records and deposition testimony of waste haulers indicated that large quantities of chemical wastes were disposed in the waste lagoon. These wastes included creosote, paint wastes, ink wastes, and pesticides. The RI/FS estimated that the total volume of contaminated materials in the lagoon was 107,000 cubic yards. The FS estimated that 17,000 cubic yards of lagoon waste materials exceeded the risk-based protective levels.

3.5 Basis for Taking Action

Based on sampling results, the hazardous substances that have been released at the site in each media include:

2011	Groundwater
Toluene	Benzene
Xylenes	Ethylbenzene
Ethylbenzene	Xylenes
1,1,2-Trichloroethane	Phenol
1,2-Dichloropropane	2-Methyl phenol
Benzene	4-Methyl phenol

Naphthalene

2-Methylnaphthalene

Phenanthrene

Bis(2-ethylhexyl)phthalate

Benzoic acid Fluoranthene

Pyrene

Hexachlorobenzene

Flourene Phenol

Butylbenzylphthalate

1.3-Dichlorobenzene

1,4-Dichlorobenzene

Hexachlorobutadiene

Acenaphthene

Benzo(a)anthracene

Chrysene

Hexachlorocyclopentadiene

Heptachlor Endrin ketone

Gamma Chlordane

Antimony

Cadmium

Lead

Silver

Thallium

Leachate

Benzene

Chloroethane

1.1-Dichloroethane

Bis(2-chloroethyl)ether

Hexachlorobutadiene

Acetone

1.2-Dichloroethane

Chlorobenzene

2-Hexanone

Methylene chloride

Toluene

1,1,2,2-Tetrachloroethylene

1,1,2-Trichloroethane

1.1 -Dichloroethane

1,2-Dichloroethane

1.2-Dichloroethene

1,2-Dichloropropane

Chloroethane

Chloroform

Trichloroethene

Vinyl Chloride

1.3-Dichlorobenzene

1.4-Dichlorobenzene

Benzoic acid

Bis(chloroethyl)ether

Naphthalene

In addition, the risk assessment concluded that the potential routes of current and future exposure above safe levels included: ingestion of and direct contact with contaminated soils; ingestion of affected groundwater; dermal contact with groundwater; inhalation of chemicals that volatilize from groundwater to air during showering; and ingestion of and direct contact with surface water and sediments during recreational activities. Inhalation of fugitive dust and volatile chemicals was also evaluated qualitatively as a potential exposure route but did not warrant a quantitative assessment because emissions from surface soil would likely be low. This is because the most contaminated portion of the site, the buried waste lagoon, is covered by up to 40 feet of demolition debris and is not considered a source of air risk under the current conditions.

4.0 REMEDIAL ACTIONS

4.1 Remedy Selection

EPA organized the remedial action at the site into two phases, or "operable units." The first operable unit was an interim action to protect human health from any immediate potential risks. EPA's ROD for the first Operable Unit Interim Action was signed on September 30, 1992. A Unilateral Administrative Order (UAO) for the first operable unit, which included site fencing, connections to the Butler County public water system for potentially affected local users of groundwater, and groundwater monitoring, was issued to the PRPs on December 9, 1992. Several PRPs complied with the UAO.

EPA signed the ROD for the second and final operable unit on June 4, 1993. The remedial action objectives for the final operable unit addressed potential future migration of site contaminants into groundwater and limited direct exposure to site contaminants to humans through source control measures. The remedial action addressed the source of the contamination by intercepting and treating on-site groundwater. The function of this action was to control the landfill site as a source of groundwater contamination; to reduce the risks associated with the site and reduce exposure to contaminated materials; and to prevent untreated leachate from running off site. The groundwater response action includes long-term monitoring with site-specific groundwater trigger levels. If site-specific groundwater trigger levels are exceeded in downgradient groundwater monitoring wells, EPA will consider whether additional remedial actions are necessary to address groundwater conditions. The ROD also required an investigation to determine the feasibility for soil vapor extraction (SVE) in the granular soil adjacent to the buried lagoon.

The major components of the selected remedy included:

- Construction of a hazardous waste landfill cap over the waste
- Interception, collection, and treatment of contaminated groundwater by a system known as the Groundwater Interception System or GIS;
- Diversion of upgradient groundwater flow, if necessary;
- Monitoring:
- Institutional controls; and
- Soil vapor extraction.

The selected remedy uses permanent treatment systems to eliminate the principal threat posed to human health and the environment by extracting the contaminated groundwater.

4.2 Remedy Implementation

A Remedial Design (RD) Investigation was performed in 1994 to collect data required to assess the feasibility of the SVE and to design the multi-media cap and the groundwater extraction/treatment system. Based on the RD investigation, EPA determined that the installation of a SVE system was infeasible.

Judge Weber of the Federal District Court in Cincinnati, Ohio, signed the Remedial Action Consent Decree (CD) for the final operable unit on April 2, 2001. The PRP group constructed the landfill cap and the GIS under the requirements of the CD. Construction began in April 2001.

Landfill Cap

The general profile of the cap from top down includes vegetative cover materials, geocomposite drainage layer, flexible geomembrane liner (FML) primary barrier layer, geosynthetic clay liner (GCL) secondary barrier layer, geocomposite gas venting layer and the prepared subgrade.

Site preparation included clearing and grubbing, preparing the GIS working platform, and removing portions of the fence. The PRPs used on-site borrow material to construct the south sidehill fill area and the landfill cap subgrade. The fill material was transported to the application areas by off-road dump trucks and applied to fill these areas in lifts with a bulldozer. The grade was maintained by using a laser and grade rod and staking grade levels in a grid layout. The grade was spot-checked with the grade rod throughout the application process and verified after completion by surveyors. The Construction Quality Assurance (CQA) consultant and the liner subcontractor inspected each section of subgrade to verify that the subgrade was acceptable for placement of the geomembrane panels.

The first geosynthetic layer above the subgrade is a geocomposite consisting of a HOPE geonet with a 6-ounce non-woven geotextile, which is heat bonded on both sides. The geocomposite layer is used for collecting landfill gas. It was installed with gas vent stubs, which allowed for ease of attachment of the gas vents prior to the installation of the overlying cap layers. The geosynthetic installation contractor manually installed the geocomposite layer. Installation of the geocomposite generally proceeded from a higher elevation to a lower elevation to minimize wrinkles. The geonet was overlapped at least four inches and affixed together with plastic ties, with the geotextile sewn together with hand-held sewing machines.

The secondary barrier layer, a GCL, serves as a backup barrier for the primary barrier. The GCL consists of a 0.75 pound per square foot bentonite clay layer bonded to a non-woven geotextile backing. The installation contractor unrolled the GCL and pulled it into place; it was overlapped at least six inches edge to edge and two feet end to end. Installation of the GCL was conducted in a manner that provided immediate coverage of the GCL by the Flexible Membrane Liner at the end of each working day to prevent hydration of the GCL.

The primary barrier of the landfill cap, the FML, consists of a 60 ml thick low linear density polyethylene FML textured on both sides. The FML was placed directly on top of the GCL immediately following installation of the GCL. The PRP's contractor completed the placement and seaming of the FML in a timely fashion to minimize weather exposure to the GCL. Field seaming the FML panels was the most critical phase of the landfill cap construction and required the most rigorous CQA documentation activities. All major seaming was performed using double-tracked fusion welders. Where fusion welding was not

possible, such as at joints and around gas vents and piezometers, an extrusion weld was used. The CQA consultant tested both the fusion and extrusion welds by nondestructive test methods to ensure a completed seal.

After the CQA consultant determined that sections of the FML were of acceptable quality, the drainage layer was installed over the FML. The drainage layer is a geocomposite consisting of an HOPE geonet with a 6-ounce non-woven geotextile heat bonded to both sides (similar material as the geocomposite gas venting layer). The drainage layer was installed over the FML to serve two purposes: 1) the geonet facilitates drainage of water that infiltrates through the vegetative cover materials, and 2) the geocomposite affords protection for the liner system during placement of the vegetative cover materials.

A minimum of 24 inches of soil was placed over the geosynthetic materials. The PRPs' contractor used an excavator, which casts material out ahead of the leading edge of the cap soil so that no wrinkling developed in the liner/drainage system materials. The cap soil was then pushed with a low ground pressure (LGP) bulldozer over the in-place drainage layer. Grade was maintained using PVC tubes as grade stakes, so as not to harm the underlying liner materials. No LGP equipment was allowed to be on top of the cap material without a minimum thickness of 18 inches of soil. The CQA consultant required that there was always a minimum of 3 feet of soil beneath the excavator and dump trucks. To accomplish the minimum thickness requirements, temporary haul roads were installed to enable access to the location where filling occurred. After the application of the cap soil layer was complete, seeding and fertilizing was conducted with a hydro-seeder. Erosion matting was used on the slopes, and affixed in place with aluminum hooks to help hold the seed in place.

The PRPs achieved surface water drainage control for the site through the construction of a network of interceptor ditches, drainage letdowns, and culverts. The purpose of the controls is to manage surface water infiltration into the landfill, minimize landfill surface erosion, and direct infiltration away from known disposal areas.

Ten gas probes were constructed around the perimeter of the landfill to monitor landfill gas migration from the site.

Groundwater Interception System

The GIS was installed to intercept and capture groundwater migrating from the landfill to the East Fork of Mill Creek. The GIS consists of a single cutoff wall of soil-bentonite keyed into bedrock, three gravel-filled trenches each with a single groundwater extraction well, and a force main system to convey the groundwater to the Butler County sanitary sewer system. The groundwater is tested to make sure the contaminant levels in groundwater discharged to the sewer system are within the limits of the PRP's Industrial Discharge Permit from the Butler County Department of Environmental Services (BCDES) (see Attachment 3).

The cut-off wall consists of a soil-bentonite slurry mixture; it is capped with native clay to provide protection and a surface for site access. The wall extends from two to three feet below ground surface (bgs) to where it is keyed into the bedrock. The PRPs constructed the

cut-off wall by excavating a trench using an extended boom excavator equipped with a 24-inch wide bucket with ripping teeth. The trench was constructed by excavating to bedrock (ranging from approximately 10 feet to 30 feet below grade) and placing the trench spoils to the side. Bentonite clay and water were mixed to create a slurry in a self-contained mixing plant. The bentonite slurry was mixed with the trench spoils to create a soil-bentonite slurry backfill. The bentonite slurry and trench spoils were mixed alongside the trench on the upgradient (upstream) side. The PRPs reincorporated the majority of the trench spoils into the cut-off wall, with excess soils being used as subgrade for the landfill cap.

The PRPs installed the interceptor trench in three separate sections between the landfill and the cut-off wall. They created a vertical zone of high permeability gravel extending from two to three feet bgs to approximately four or five feet below the lowest significant sand/gravel seam. The interceptor trenches were generally installed parallel to the cut-off wall. Each trench was excavated to the specified depth (ranging from 14 to 23 feet below grade). The PRPs placed a bio-polymer slurry in the trench bottom prior to placing the geotextile and backfilling, in order to ensure the integrity of the excavation sidewalls. The slurry allowed for the placement of the geotextile, the granular material, and the observation well components. Prior to placement of the slurry, a geotextile filter fabric was installed along the bottom and sides of the trench. The geotextile fabric was overlapped four feet lengthwise to ensure complete coverage of the trench. The purpose of the geotextile is to filter out fines from the groundwater that may clog the extraction well pumps.

As backfill was placed around the interceptor trench, the PRPs installed extraction and observation wells in accordance with the design specifications. The groundwater extraction pumps were installed in the extraction well of each interceptor trench. The pumps consist of 4" diameter submersibles rated at 25 gallons per minute (gpm). The pumps' discharge is transported through a vertical discharge line that is connected to the force main. The force main consists of a 2-inch diameter HOPE pipe approximately 30 inches bgs extending from Extraction Well #1 to the Gravity Manhole, at which point it is discharged into the Butler County public sanitary sewer system.

Other Issues

Soils from two contaminated soil areas located outside the landfill area, but within the limits of the site, Area BP01/BP02 and Area GW-38, were excavated and moved to the on-site landfill and incorporated under the landfill cap. After excavation of these areas, the PRPs collected and analyzed confirmation soil samples from each location to ensure that all the contaminated soil was excavated.

Monitoring wells and piezometers were installed in and around the landfill to: 1) monitor the groundwater elevation under the cap to determine contact with buried waste, and 2) assess the long-term performance of the groundwater interception system (interception trench and cut-off wall) in accordance with the Long Term Performance Plan (LTPP) (part of operation and maintenance, O&M). During the remedial action (RA) construction activities, the PRPs installed nine new groundwater monitoring wells and one replacement groundwater well.

Twelve piezometers were installed, four of which are installed through the landfill cap in order to monitor whether the groundwater is in contact with landfill waste.

The remedy also restricts physical access to the site with a six-foot high fence with barbed wire at the top, around the entire site perimeter. The fence is sufficient to prevent the public from easily entering the site. The fence is posted with numerous visible warning signs to inform the public of potential site hazards.

Nearby residences located southwest of the site were connected to a public water supply in order to prevent these residents from potential exposure to contaminated groundwater.

The RA construction was completed at the site in September 2001. A Preliminary Close Out Report (PCOR) was completed on September 27, 2001.

In August 2007, Ohio EPA was notified via a complaint that assorted electronic waste (e-waste) was being stored in open containers along the southwestern portion of the fence surrounding the Skinner Landfill. Ohio EPA investigated the complaint and identified 78 one-cubic-yard cardboard containers of crushed computer glass and a roll-off container of assorted computer parts, including intact monitors and hard drives. The waste was being stored in an uncovered location and the weather was causing the containers to deteriorate rapidly.

Ohio EPA sampled the waste material and determined it to be hazardous waste based on its high lead content. In February 2008, Ohio EPA issued Notices of Violation to the waste generator and to Skinner Demolition requiring abatement of the illegal storage of hazardous waste. Neither party submitted a compliance plan to Ohio EPA. In March 2008, Ohio EPA requested assistance from EPA with the assessment, removal, and disposal of the hazardous waste.

EPA confirmed that the waste exceeded hazardous waste regulatory limits for lead. After both parties failed to submit a response to EPA's Notice of Liability, EPA initiated a time-critical removal of the hazardous waste. EPA and its contractors began the cleanup on June 9, 2008. Approximately 131 tons of hazardous waste, including crushed cathode ray tubes, e-waste, and contaminated soil were disposed of at the Michigan Disposal Waste Treatment Plant in Belleville, Michigan. EPA completed this removal action on June 11, 2008.

4.3 System Operations/Operation and Maintenance (O&M)

O&M activities are performed by Earth Tech/AECOM, a contractor for the PRP group. In addition, Butler County has personnel performing activities associated with O&M.

The groundwater extraction system consists of approximately 770 lineal feet of interceptor trench in three sections and 985 lineal feet of cut-off wall. Located at the low point of the three sections of the interceptor trenches are three extraction wells. Each of the three extraction wells has a submersible pump in it. The pump discharge is tied to a force main that transfers the groundwater from the wells to an existing sanitary sewer, and from there to the Butler County sewage treatment plant (Publicly Owned Treatment Works or POTW).

The pumps have three level controls, one for "pump on," one for "pump off," and one for high level "alarm." If a "pump on" signal is continuous for a predetermined amount of time, the off-site system operators are advised of this condition via an automatic alarm. Each pump is connected to a run timer that records the time a pump has been operating.

All of the pumps operate independently. They are connected to a main control panel, which is located at the west end of the GIS. The panel contains run indicator lights for the pumps as well as depth of water indicators in each extraction well with respect to the depth transducer. Additionally, the panel includes a telephone auto dialer that calls a minimum of four predetermined numbers in the event of an alarm situation. The auto dialer has prerecorded messages indicating the alarm condition and location. The system is designed to be monitored remotely, without the need for the routine presence of an operator.

The pumps, valves, settings of the pump control and alarm, flow measurement device, and continuous sampler are the primary components requiring maintenance on the GIS. During the first six months of operation, the O&M tasks related to the GIS, such as routine maintenance and calibrating the GIS equipment, were performed on a monthly basis. After the first 6 months, the O&M activities have been conducted on a quarterly basis.

The O&M plan provides for inspection and repair of the physical components of the site after closure. Maintenance activities for the final cap include mowing, earthwork activities to correct erosion and sedimentation problems, re-vegetation of disturbed or distressed areas, regrading in settlement areas as determined necessary, and localized repairs due to intrusion, vandalism, etc. The final cap is inspected quarterly for signs of damage. The O&M activities are planned to occur for 30 years after construction completion.

The LTPP provides the mechanism to ensure that the RA meets the long-term performance standards set forth in the ROD. Sampling and chemical analysis of groundwater, surface water, and the measurement of groundwater elevations have occurred as part of O&M activities since the RA was completed. A description of these field activities is provided below.

Groundwater Sampling Plan

A line of monitoring wells between the GIS alignment and the East Fork of Mill Creek aims to demonstrate that contaminated groundwater is not being discharged to Mill Creek. Earth Tech/AECOM collects quarterly groundwater samples from these 11 monitoring wells, known as the point of compliance. The samples are analyzed for the parameters shown in Attachment 4. However, the approved remedial design document provides that the PRPs may petition EPA and Ohio EPA to modify the parameter list and sampling frequency based on the results of groundwater monitoring conducted on a quarterly basis for two years after completion of the landfill cap and GIS.

Three monitoring wells installed during the RI are located outside the fenced area. Earth Tech/AECOM samples and tests these wells annually to monitor groundwater quality around the landfill. In addition, Earth Tech/AECOM records the measurements of water levels and

the presence or absence of Dense Non Aqueous Phase Liquids (DNAPLs), dense organic chemicals that are not soluble in water, from all existing piezometers, monitoring wells and select gas probes. The measurements are used to evaluate the water table and to monitor for DNAPLs in the vicinity of the landfill cap and GIS.

Surface Water Monitoring Plan

Earth Tech/AECOM collects surface water samples for analysis from three monitoring points along the East Fork of Mill Creek and three run-off outfall locations. Monitoring points were chosen to allow impacts from site run-off to be evaluated. Water entering the site upgradient (uphill) of the landfill and water leaving the site are monitored. Also monitored are points where site water is discharged into streams and points downstream of these discharges. Earth Tech/AECOM collects these samples quarterly and analyzes them for the parameters shown in Attachment 4. The PRPs may petition EPA and Ohio EPA to modify the parameter list and sampling frequency based on the results of groundwater monitoring conducted on a quarterly basis for two years after completion of the landfill cap and GIS. The PRP group recently submitted a petition to EPA to modify the parameter list and sampling frequency. EPA anticipates making a decision on this petition in 2009.

Groundwater Waste Monitoring Plan (GWMP)

The GWMP provides a mechanism to evaluate whether the waste material underneath the cap is in contact with site groundwater and whether the landfill cap is affecting the groundwater elevations beneath the landfill. The plan provides for quarterly measurements of the groundwater elevation and flow direction for two years (subsequent to the RA completion) or until the groundwater data have stabilized for at least four consecutive quarters, whichever is longer. The points that have been measured under the GWMP are 12 piezometers, 15 monitoring wells, and 2 gas probes within and around the landfill cap.

This monitoring began in September 2001, which is the date that EPA approved the RA construction completion report. The data derived from the quarterly sampling events is used to evaluate whether or not the waste material underneath the cap is in contact with site groundwater. Earth Tech/AECOM implements this monitoring in conjunction with the quarterly groundwater sampling at the 11 monitoring wells that are the points of compliance. The data are used to assess the effectiveness of the GIS and the potential need to construct an upgradient slurry wall.

In 2006, it was necessary to replace four inoperable piezometers. Piezometers P-9 to P-12 were used to monitor groundwater levels beneath the landfill cap, with respect to whether groundwater is in contact with the bottom level of the waste. Subsurface settlement caused the original piezometers to warp, which restricted access to the groundwater level measurement probes. The former piezometers were replaced with Piezometers P-9R to P-12R, using a larger diameter stainless steel casing to minimize future constriction of the well casings.

The Corrective Action Work Plan for Piezometer Replacement was approved by EPA on May 23, 2006. The piezometer replacement took place between December 5, 2006, and January 22, 2007. The corrective measures were performed in accordance with the EPA-approved Work Plan, with the exception of the locations of piezometers P-9R and P-12R. The P-9R boring location was placed approximately 10 feet to the north of its proposed location, due to the inability to drill down more than approximately 7 feet bgs at the proposed original boring location. P-12R was installed 20 feet to the northeast of the proposed location, due to errors in the field measurement caused by the slope in topography at this location. P-10R and P-11R are located within 5 feet of the original proposed locations (see Figure 1). Since the original groundwater—waste monitoring piezometers were damaged and new piezometers had to be installed, EPA approved an extension of the monitoring period regarding the determination of whether an upgradient slurry wall is required at the site.

The RA consent decree provides that EPA will examine the data obtained through the GWMP. If EPA determines that the elevation of the groundwater is in contact with the waste material underneath the cap and may reasonably be expected to remain in contact with the waste material for an additional three years after completion of the two-year groundwater monitoring period, the PRP group will submit to EPA a plan and schedule to construct the upgradient groundwater slurry wall. After the installation of the new piezometers (Piezometers P-9R to P-12R) in 2006, two years of groundwater monitoring was completed in the fall of 2008. EPA expects to make a decision on the need for the upgradient slurry wall in 2009.

4.4 Institutional Controls

Institutional controls (ICs) are non-engineered instruments, such as administrative and legal controls, that help to minimize the potential for exposure to contamination and that protect the integrity of the remedy. ICs are required to assure long-term protectiveness for any areas which do not allow for unlimited use or unrestricted exposure. ICs are also required to maintain the integrity of the remedy. The 1993 ROD included the imposition of proprietary restrictions and other institutional controls to prevent the future development of the site and assure the integrity of the remedial action and prohibit the potable use of site groundwater.

Analysis of Existing ICs: On January 24, 2006, an environmental covenant for the site under the Ohio version of UECA was signed by the site owners and was recorded in Butler County on February 14, 2006 (see Attachment 5). The environmental covenant was intended to prevent the development and use of land within the site boundary, to assure the integrity of the landfill cap and other components of the remedial action, and to prevent the potable use of site groundwater. The environmental covenant implements the requirements set forth in the 1993 final ROD.

At the time the environmental covenant was implemented, EPA reviewed a site title commitment. For this five-year review, EPA re-analyzed this title commitment, along with a topographic map and a site survey that included the mapping of utility easements, to insure that existing easements would not impact the landfill cap and other remedy components. This analysis revealed that there were two easements identified in the 2005 title commitment

that had not been shown on the site survey map. The PRPs have already agreed to obtain a current title commitment and redo the site survey map, which will be submitted to EPA for analysis. EPA will review the current title commitment and site survey map to ensure that the environmental covenant remains in place and is effective.

Current compliance: Based on site inspections and interviews, EPA finds there is no evidence of a cap breach and the existing use is consistent with the objectives of the landfill cap and land use restrictions.

Long-Term Stewardship: Long-term protectiveness at the Site requires compliance with use restrictions to assure the remedy continues to function as intended. The regular inspections are provided for in the O&M plan, and constitute long-term stewardship at the site. However, the O&M plan does not provide for an annual certification to EPA that there is no existing land or resource use at the site that is inconsistent with the implemented environmental covenant. To assure proper maintenance and monitoring of effective ICs, long-term stewardship procedures will be reviewed and the O&M plan revised if needed. Additionally, use of a communications plan and use of a one-call system should be explored for long-term stewardship.

Table 2. Institutional Controls Summary Table				
Media, Engineered Controls & Areas that Do Not Support UU/UE* @ Current Conditions	IC Objective	IC Instrument Implemented		
RA Components such as wells, and Groundwater Interception System	Prohibits use of land underlying the site, and assures integrity of remedy components	Environmental Covenant		
Landfill Cap	Prohibits use of land underlying the site, and assures integrity of landfill	Environmental Covenant		
Groundwater-area that exceeds cleanup levels	Prohibits use of groundwater	Environmental Covenant		

^{*} unlimited use/unrestricted exposure

5.0 PROGRESS SINCE LAST FIVE-YEAR REVIEW

This is the third five-year review for the Skinner Landfill Site. The second five-year review was completed and signed in March 2004. The second five-year review protectiveness statement concluded the following: that the remedy is protective of human health and the environment in the short term; that there are no current exposure pathways and the remedy appears to be functioning as designed; that the landfill cap, the GIS, public water supply for nearby residents and groundwater monitoring have achieved the remedial objectives to minimize the migration of contaminants to groundwater and surface water and prevent direct contact with, or ingestion of, contaminants in soils and sediments; and that long-term protectiveness of the remedial action will be achieved when cleanup goals are met. Issues during the 2004 review included the following:

ICs need to be implemented

- Creek bank was eroded
- Site fence missing near eroded creek bank
- Water accumulation in vault box and inspection manhole
- The need for upgradient groundwater control must be evaluated
- Security measures: Site fence in disrepair in certain areas, allowing easy access to anyone wishing to trespass

The follow-up work to address the issues of the 2004 five-year review included:

- Environmental Covenant was recorded in Butler County on February 14, 2006
- Gabion (rock) wall was installed to eliminate creek bank erosion
- Site fence was added after gabion (rock) wall was completed
- 4-inch drain line was installed to allow water from Vault Box to drain back into GIS
- Groundwater elevations have been measured and reported quarterly. Four piezometers extending through cover system and waste became inoperable, and were replaced with stainless steel casings
- Periodic checks have been made for trespassers and fence has been repaired when necessary

Table 3 summarizes the issues, recommendations and follow-up actions from the 2004 five-year review.

Table 3. Issues, Recommendations and Follow-up Actions from 2004 Five-Year Review						
Issues from 2004 Review	Recommendations/ Follow-up Actions	Party Responsible	Milestone Date	Action Taken and Outcome	Date of Action	
Institutional controls need to be implemented	Implement ICs	PRPs	NA	Environmental Covenant was recorded in land records	Jan. 24, and Feb. 14, 2006	
Creek bank eroded	Install gabion (rock) wall	PRPs	Spring 2004	Gabion wall installed	May 2004	
Site fence missing near eroded bank	Install fence after creek bank stabilization	PRPs	Spring 2004	Fence installed	June 2004	
Water accumulation in vault box and inspection manhole	Pump water out periodically	PRPs	As needed	Drain line installed	April 2006	
Possible upgradient groundwater control	Quarterly measurements of groundwater elevations	PRPs	Fall 2005	Continued groundwater elevation measurements	Decision will be made in 2009	
Security measures	Repair fence where needed and put up more warning signs where trespassing might occur	PRPs	Next 30 years	Fence has been repaired when necessary	ongoing	

While the PRPs are responsible for implementing all recommended follow-up actions, all recommendations are completed under EPA and Ohio EPA oversight.

6.0 FIVE-YEAR REVIEW PROCESS

6.1 Administrative Components

The Skinner Landfill five-year review was prepared by Scott Hansen, EPA Remedial Project Manager for the Site. Chuck Mellon, State Project Manager with the Ohio EPA, also assisted in the review. This five-year review consisted of the following activities: a review of relevant documents (see Attachment 2); interview with government official and representatives of the construction and operations contractors; and a site inspection. The completed report will be available in the site information repository for public view.

6.2 Community Notification and Involvement

The completed third five-year review report and background data will be available in the site information repository and on the EPA website for public view. An advertisement notice regarding the five year-review process was placed in the Pulse-Journal newspaper for public review on January 15, 2009 (see Attachment 7). EPA received no public comments regarding the five-year review.

Community relations activities ongoing at the Site include reporting on the comprehensive operation and maintenance sampling program currently being carried out, to assure that human health and the environment continue to be protected.

6.3 Document Review

EPA personnel reviewed Skinner Landfill site documents in preparing this five-year review report. They include the following:

- Second Five-Year Review Report, March 2004
- RA Consent Decree, April 2001
- Record of Decision, June 1993
- Skinner Landfill Quarterly Monitoring reports, 2004-2008
- 2005 Title Commitment, Site Survey, and Site Topographic Map

6.4 Data Review

Groundwater monitoring has been occurring at this site since August 2003. The Quarterly Groundwater Monitoring reports, March 2004 – September 2008, were the comprehensive reports that EPA reviewed as part of this five-year review. These reports include the most

recent results from the site groundwater monitoring wells, along with groundwater elevation data.

The PRP conducted quarterly sampling from 2003 to the present. Samples are analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs) and metals. Several metals (arsenic, selenium, chromium, mercury, cyanide) and one VOC (benzene) were detected above trigger levels at various groundwater sample locations; however, the quarterly analytical results before and after the detections were either below the trigger levels or non-detect. Attachment 10 includes the groundwater test results summaries. Several metals (arsenic, chromium, and zinc) and SVOCs (fluoranthene, naphthalene, phenanthrene, and phenol) were detected above trigger levels at various surface water sample locations; however, the quarterly analytical results before and after the detections were either below the trigger levels or non-detect. Attachment 9 includes the surface water test results summaries. Based on the quarterly baseline sample results (October 2001 – August 2003), the quarterly monitoring results from 2003 to 2008 indicate that the target compounds (Attachment 4) have declined or remained stable. Since the installation of the new piezometers, the groundwater elevations under the landfill cap indicate that groundwater levels have dropped below the buried waste at piezometer P-12R. Attachment 8 includes the groundwater-waste monitoring summary.

Landfill cap maintenance involves the inspection and repair of any soil burrowing or erosion locations, and mowing of the landfill surface as needed.

The PRP group has an Industrial Discharge permit with BCDES to discharge groundwater to the Butler County sewer system. Sampling of the effluent from the GIS is part of the conditions required by the BCDES discharge permit (see Attachment 3). Historically the discharge has been in compliance with the permit.

6.5 Site Inspection

The inspection at the site was conducted on January 29, 2009, by Scott Hansen, EPA, and Alex Maginnis and Ron Roelker, Earth Tech/AECOM. The purpose of the inspection was to assess the protectiveness of the remedy, including the presence of fencing to restrict access, the integrity of the landfill cap, and the general conditions of the GIS and monitoring wells.

The inspectors walked around the surface of the landfill. Site access is available through locked gates which enclose the site landfill and other components of the remedy (GIS, monitoring wells). The Site Inspection Checklist is in Attachment 6. The landfill cap over most of the site was covered with about 6 to 8 inches of snow so it was difficult to determine whether the cap was in good condition.

The only issue found during the five-year review site inspection was that the fence needs minor repairs.

6.6 Interviews

The following individuals were contacted by telephone as part of the five-year review:

- Ron Roelker, Earth Tech/AECOM, PRP contractor (Interviewed January 2009)
- Chuck Mellon, Ohio EPA, project manager (Interviewed January 2009)

Mr. Roelker and Mr. Mellon stated that there are no serious issues related to the site. They also stated that community interest about the site remains low. As discussed in Section 4.2 of this report, in 2007, Ohio EPA was contacted about waste being left on the site. Chuck Mellon subsequently conducted a site inspection and informed EPA that waste was being illegally stored at the site, and EPA conducted a removal action in June 2008. Mr. Roelker confirmed that no changes in land use are planned for the site, and that institutional controls are in place.

7.0 TECHNICAL ASSESSMENT

7.1 Question A: Is the remedy functioning as intended by the decision documents? Yes

RA Performance: The remedies selected in the 1992 ROD for the first operable unit interim action and the 1993 final ROD have been implemented and remain functional, operational and effective. As long as the site hazardous waste cap and GIS continue to be maintained and monitored, and the security perimeter fence is maintained, the source area remedies will ensure that the site remains protective.

Cost of System Operations/O&M: Current annual O&M costs are not available since the PRPs conduct the O&M. The 1993 ROD estimated the annual O&M costs would be approximately \$397,000.

Opportunities for Optimization: Given the adequate performance of the remedy at the site, this five-year review does not identify a need for optimization at this time.

Early Indicators of Potential Remedy Failure: No early indicators of potential remedy failure were noted during the review. Based on the quarterly baseline sample results (October 2001 – August 2003), the quarterly monitoring results from 2003 to 2008 indicate that the target compounds (Attachment 4) have declined or remained stable. Maintenance activities have been consistent with expectations.

Implementation of Institutional Controls and Other Measures: The 1993 ROD remedy included the implementation of proprietary restrictions and other institutional controls to prevent future development of the site, assure the integrity of the remedial action, and prohibit the use of site groundwater as a drinking water source. These restrictions were required to protect the integrity of the landfill cap, the GIS, and all other components of the RA. On February 14, 2006, an environmental covenant, under the Ohio version of the UECA, was recorded in the land records for the site. The environmental covenant implements the ROD requirements.

EPA reviewed a title commitment before the environmental covenant was recorded in 2006. As part of this five-year review, the PRPs have agreed to obtain a current title commitment and to redo the site survey map, which will be submitted to EPA for analysis. EPA will

review the current title commitment and site survey map to ensure that the environmental covenant remains in place and is effective.

7.2 Question B: Are the assumptions used at the time of remedy selection still valid? Yes

Changes in Standards and To Be Considered: Requirements contained in environmental laws and regulations, which were outlined in the 1993 ROD and the 2004 Five-Year Review Report, are still valid at the Skinner Landfill site.

Changes in Exposure Pathways: No changes in the site conditions that affect human or environmental exposure to contaminants were identified as part of the five-year review. There are no current or known planned changes in the site land use.

Changes in Risk Assessment Methodologies: Changes in risk assessment methodologies since the second five-year review are not significant and do not call into question the protectiveness of the remedy.

7.3 Question C: Has any other information come to light that could call into question the protectiveness of the remedy? No

No other events have affected the protectiveness of the remedy and there is no other information that calls into question the short-term and long-term protectiveness of the remedy.

Technical Assessment Summary

According to the data reviewed and the site inspection, the remedy, including the recorded site environmental covenant, is functioning as intended by the 1993 ROD. There have been no changes in the physical conditions of the site, clean-up standards, contaminant toxicity or exposure pathways that would affect the protectiveness of the remedy. No additional information has been identified that would call into question the protectiveness of the remedy.

8.0 ISSUES

The following issue was identified during the five-year review site inspection but does not impact the protectiveness of the remedy:

• The site fence needs minor repairs

The following issues were identified during the five-year review process and could impact the protectiveness of the remedy as indicated in Table 4.

- Security measures (site fence repair and control illegal dumping)
- The need for upgradient groundwater control must be evaluated

- Institutional controls: Location of some existing easements and their relationship to remedy components is unknown
- Institutional controls: Ensure long-term stewardship

Table 4. Issues that Impact Protectiveness				
Issue	Currently Affects Protectiveness (Y/N)	Affects Future Protectiveness (Y/N)		
Security measures	N	Y		
Upgradient groundwater control	N	Y		
Institutional controls: Location of some existing easements and their relationship to remedy components is unknown	N	Y		
Institutional controls: Ensure Long-term stewarship.	N	Y		

Y=yes; N=no

9.0 RECOMMENDATIONS AND FOLLOW-UP ACTIONS

Table 5. Recommendations and Follow-up Actions						
Issue	Recommendations/ Follow-up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness (Y/N)	
L					Current	Future
Security measures	Repair fence where needed and control illegal dumping	PRPs	EPA	As needed	N	Y
Upgradient groundwater control	Continued quarterly measurements of groundwater elevations	PRPs	EPA	September 2009	N	Y
Institutional controls: Location of some existing casements and their relationship to remedy components is unknown	Update title commitment and site survey map; check all easements of record to make sure there is no interference with site remedy components	PRPs will obtain title commitment and updated site survey map	EPA	September 2009	N	Y
Institutional controls: Ensure long-term stewarship	Review long-term stewardship procedures and update if necessary.	PRPs	EPA	March 2010	N	Y

Y=yes; N=no

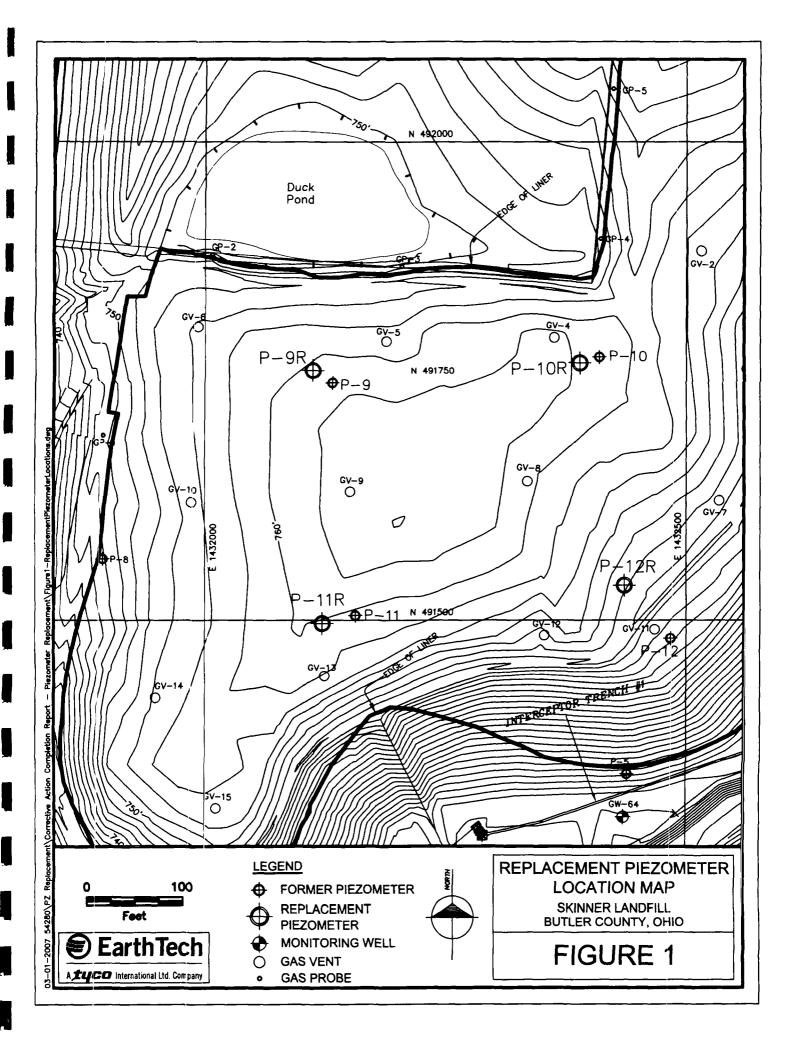
10.0 PROTECTIVENESS STATEMENT(S)

The assessment of this five-year review found that the remedy at the Skinner Landfill Superfund site is protective of human health and the environment. There are no current exposure pathways and the remedy appears to be functioning as designed. The landfill cap, the GIS and the connection of nearby residents to the public water supply eliminate the source of contamination and have achieved the remedial objectives to minimize the migration of contaminants to groundwater and surface water and to prevent direct contact with, or ingestion of, contaminants in soils and sediments. Institutional controls, in the form of an environmental covenant under the Ohio version of the Uniform Environmental Covenants Act, have been implemented to protect the remedy components, and to protect against improper use of site land and groundwater resources. Compliance with effective ICs will be ensured through long-term stewardship by implementing, maintaining, monitoring and enforcing effective ICs as well as maintaining the site remedy components.

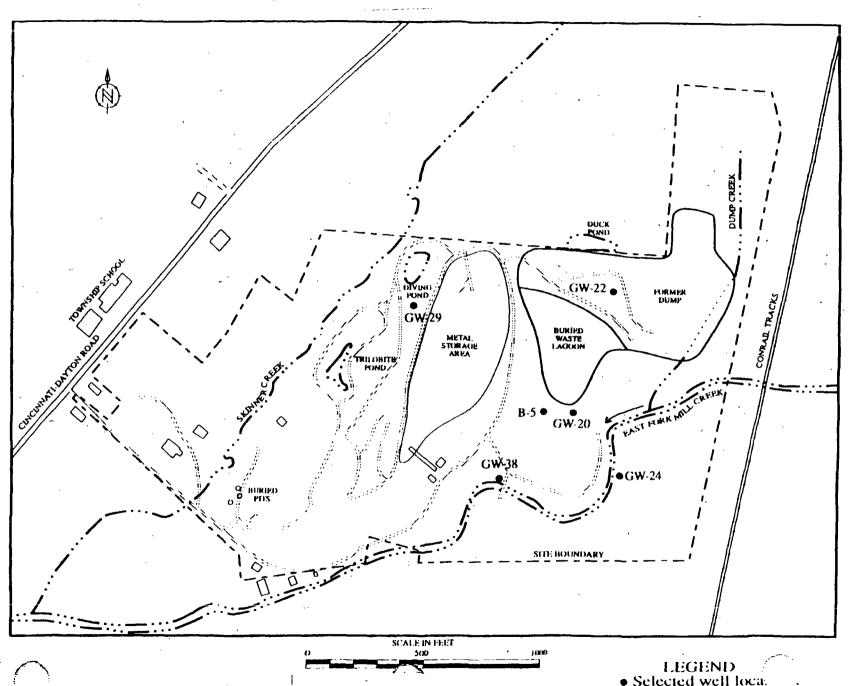
11.0 NEXT REVIEW

EPA performs statutory reviews on remedies selected that result in hazardous substances, pollutants or contaminants remaining at sites above levels that allow for unlimited use and unrestricted exposure. Since hazardous substances, pollutants or contaminants are contained at the site and will potentially remain above EPA and State of Ohio regulatory standards in the future, the Skinner Landfill Site will require ongoing Five-Year Reviews. Therefore, another report is scheduled to be completed in 2014, five years after the current five-year review. The completion date of the current five-year review is the signature date shown on the cover attached to the front of this report.

FIGURES







• Selected well local as referred to in text



List of Skinner Landfill Site Documents Reviewed for Five-Year Review Report

- Second Five-Year Review Report, March 2004
- RA Consent Decree, April 2001
- Record of Decision, June 1993
- Skinner Landfill Quarterly Monitoring reports, 2004-2008
- 2005 Title Commitment, Site Survey, and Site Topographic Map

ATTACHMENT 3



Butler County Department of Environmental Services

Water • Wastewater • Solid Waste • Recycling & Lifter Prevention

Commissioners:

Courtney E: Combs Charles R. Furmon Michael A. Fox

SPECIAL WASTEWATER DISCHARGE PERMIT

March 17, 2003

The Skinner Landfill Site Work Group c/o The Dow Chemical Company Attn: Ben Baker Remediation Leader The Dow Chemical Company 4520 E. Ashman Midland, MI 48674

Re: Skinner Landfill Consent Decree

Permit # 150-01 Permit Fee \$200.00

Effective Date: 3/11/2003 Expiration Date: 9/30/2003

In accordance with the provisions of the agreement reached with Butler County Department of Environmental Services (hereafter "BCDES") in May 1996, this Special Wastewater Discharge Permit is hereby granted to The Skinner Landfill Site Work Group, c/o The Dow Chemical Company Attn: Ben Baker Remediation Leader 4520 E. Ashman Midland, Michigan 48674 (hereafter called "Permittee") on this 17th day of March, 2003. This permit supersedes the permit originally issued on 03/11/2003, and is retroactive to 03/11/2003. Permittee is authorized to discharge into the Butler County Sewer System in a manner approved by BCDES under the following conditions of this draft permit:

BCDES has agreed to accept the groundwater discharge from Skinner Landfill Site, only based on the understanding that a Special Discharge Permit would be issued by BCDES with site-specific conditions for connection, monitoring, compliance, and user fees. BCDES proposes to handle this discharge in a unique way because (a) groundwater is a

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prohibited discharge according to the BCDES Sewer Use Rules (hereafter "Rules"), (b) the pollutant concentrations and flows may fluctuate and (c) there is no control or pretreatment system in place. This Draft Special Discharge Permit will be subject to a 14 day public notification process prior to consideration by the Butler County Board of Commissioners.

The permit shall contain special conditions of the discharge and shall expire on September 30, 2003. Subsequent permits shall be effective for up to five (5) years. BCDES will use the sampling vault to collect flow proportional samples. Grab samples will be obtained from the next downstream manhole from the sampling vault. The discharge will have a flow monitoring system. BCDES requires all dischargers to execute a flow monitoring agreement and have an effective O&M and calibration program in place so that BCDES is assured reliable flow data.

The monthly usage fee shall be established at 200% of the standard discharge fee/1000 gallons based on the potentially hazardous content of the waste.

Except as provided in this Special Permit, Permittee shall at all times remain subject to all provisions of the Rules. This Permit does not constitute a waiver by BCDES or the Board of County Commissioners of the right to seek any lawful remedy or penalty for any such violation of this Permit or Rules.

Section 9.6A of the Rules provides that any person who violates a permit condition is subject to a civil penalty in an amount not to exceed \$10,000.00 per day of such violation (Section 9.6A). Consequently, should Permittee violate this Special Wastewater Discharge Permit or any Rule, the County, acting through its Director of BCDES, shall have the authority to assess civil penalties of up to \$10,000.00 per violation per day. A violation of this permit is subject to such penalties as may be provided by law.

In addition to civil and criminal liability, the Permittee violating this permit, or causing damage to or otherwise materially inhibiting the Upper Mill Creek wastewater disposal system shall be liable to the BCDES for any expense, loss, or damage caused by such violation or discharge. The BCDES shall bill the Permittee for the costs incurred by the BCDES for any cleaning, repair, or replacement work caused by the violation or discharge. Refusal to pay the assessed costs shall constitute a separate violation of Section 9.6B of the Rules.

This permit may be modified by agreement of the Permittee and BCDES in accordance with provisions of the Rules or as lawfully required by the United States EPA, Ohio EPA or agencies thereof. Should BCDES and Permittee be unable to come to terms on a modification of this Permit, BCDES may cancel any remaining term of this Permit upon 180 days notice to Permittee.

Failure on the part of the Permittee to fulfill any of the specified conditions may be sufficient cause for immediate revocation of this permit per Section 5.7 of the Rules. This permit is further subject to termination upon thirty (30) days written notice to the Permittee by an authorized representative of BCDES.

It is the responsibility of the Permittee to submit to an Application for Special Wastewater Discharge Permit to BCDES at least ninety (90) days prior to the expiration date of this permit.

This permit may be assigned or transferred to another discharger per provisions of Section 5.6 of the Rules, which require approval of the Director. Such assignment will not be unreasonably withheld. Notice of changes in the point of discharge, in the number or location of extraction points or other changes that may impact the quality or quantity of the effluent must be provided to and acceptable to BCDES per Section 6.5 of the Rules.

Incidental discharges resultant from monitoring, and/or operation and maintenance of the Skinner Landfill Site as of the effective date of the Special Permit Issuance may be accepted upon notification to BCDES per the Rules.

ames A. Parrott

Director

SPECIAL PERMIT CONDITIONS

المراكب والمعاملية والمخريق الانا المراكم ويرييان الما

- Except as otherwise provided in this Special Permit, the Permittee shall comply with the Rules and with the U.S. v Skinner Consent Decree. Where inconsistency exists between the Rules and the Consent Decree, an understanding shall be reached between BCDES and Permittee, with court approval where necessary, as to the terms of this Special Permit before discharges are accepted. In the event of a dispute between the Permittee and BCDES after the Permit is granted, the parties agree to attempt to resolve the dispute first through mediation using a mediator acceptable to both parties, and including U.S. EPA in the mediation if requested by the Permittee.
- 2) The Permittee shall allow BCDES personnel, upon presentation of their credentials or other documents as may be required by law, to: enter the Skinner Site premises and have access to, inspect, and copy, at reasonable times, any records located at any facility that are deemed necessary by such personnel to determine Permittee's compliance with this Permit. Permittee shall have the right to claim business confidentiality, trade secret, or privileges recognized by state or federal law on the face of any document sought to be copied by BCDES personnel. Should any other person attempt, under the Ohio Public Records Law, to obtain a copy of material from BCDES which Permittee claims to be protected from disclosure, BCDES shall notify Permittee of the request and allow Permittee to defend its claim of entitlement to exclusion before a judge of the Butler County Court of Common Pleas and no material shall be released except in accordance with the final ruling of an Ohio court upon the question. The Permittee shall allow BCDES personnel to inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under this permit; BCDES may sample or monitor, for the purposes of assuring permit compliance, any relevant substances or parameters at any location; and inspect any storage area where pollutants, regulated under this permit, could originate, be stored, or be discharged to the sewer system. Should BCDES be denied access to records it seeks to determine compliance with the terms and conditions of this Permit, then a responsible official of the Permittee shall provide BCDES with an affidavit attesting to Permittee's full and complete compliance with the terms of this Permit under penalty of perjury. Should BCDES be denied access to information it seeks or be denied an acceptable affidavit in lieu of access, BCDES may terminate this Permit upon thirty (30) days prior notice to Permittee.
- BCDES will conduct regular discharge monitoring to determine that constituents in the effluent from Skinner Landfill Site do not exceed local limits or site-specific limits or pose a threat to the wastewater treatment facility, the collection system, County employees or the receiving stream. The inorganic and organic discharges shall not be in excess of local or site specific limits (see attached maximum discharge limit chart). Should sampling indicate violations of these limits, BCDES reserves the right to suspend the discharge and/or require pretreatment prior to accepting additional flow.

- Due to the nature and source of the discharge, BCDES will aggressively monitor local limit parameters until the County feels that it has representative data, at which time a normal schedule may be adopted of monthly local limits monitoring. However, BCDES has the right to sample, with or without notice, as frequently as it determines necessary. The costs associated with sampling will be billed back to the discharger along with any surcharge fees associated with high strength acceptable waste. Any prohibited waste in excess of site specific limits will be subject to the enforcement provisions of the Rules and the Enforcement Response Plan. BCDES understands that seasonal variations may have an impact on water quality parameters, and we want to be assured that the concentrations we are given are within the Publicly Owned Treatment Works (POTW's) ability to safely handle.
- 5) The Permittee shall report to the BCDES any significant changes in location, operational conditions, the quality or quantity of discharges or chemical storage procedures as provided in Section 6.5 of the Rules.
- The Permittee shall notify the BCDES immediately after Permittee's knowledge of the occurrence of an accidental discharge of substances or slug loads or spills that may enter the public sewer. BCDES should be notified by telephone at (513) 887-3686.

The notification shall include location of discharge, date and time thereof, type of waste, including concentration and estimated volume, and corrective actions taken (Section 6.6A). The Permittee's notification of accidental releases in accordance with this section does not relieve it of other reporting requirements that arise under local, State, or Federal laws or the U.S. v Skinner Consent Decree.

Within 5 days of the verbal notification of a discharge, a complete written report must be submitted detailing the quantity and quality of discharge, reason for discharge, and steps taken to prevent further occurrences.

- 7) The Permittee shall keep on file at a location of Permittee's choosing, all records, documents, reports, and correspondence pertaining to effluent monitoring, sampling, and chemical analysis made by or prepared for the Permittee. Said records, reports, documents and correspondence shall be kept on file for a minimum of three (3) years.
- 8) Particular attention should be given to the following: (Note: This section will be utilized to reflect the categorical standards and limits (40 CFR 433) if applicable).
 - (a) From effective date of the permit through September 30, 2003, the Permittee's effluent wastewater discharged to the County Sewer System shall not exceed the following limits based on flow rates provided in the application.

BCDES Special Permit Limits for Skinner Landfill Site

Skinner Landfill Applicable Applicable Limit Parameters		Allowable Mass Loading Limits ⁽¹⁾ (lbs/day)
тто	Site Specific	0.53
Arsenic	Local Limit	0:04
Cadmium	Local Limit	0.02
Chromium, Total	Local Limit	0.88
Chromium, Hexavalent	Local Limit	0/13
Copper	Local Limit	0.35
Lead	Local Limit	0.13
Mercury	Local Limit	<0.00009
Molybdenum	Local Limit	0.17
Nickel	Local Limit	0.31
Selenium	Local Limit	0.03
Silver	Local Limit	0.01
Cyanide, Total	Local Limit	0.03
Zinc	Local Limit	0.25
Ammonia	Local Limit	9:17
BOD₅	Local Limit	366.96
COD	Local Limit 917.40	
Oil & Grease	Local Limit	18.35
TSS	Local Limit	229.35

⁽¹⁾ Based upon 11,000 gallons per day discharge rate. The method detection limit (MDL) for mercury is 0.2 ug/l. Ohio EPA defined practical quantification limit (PQL) is 5 times the MDL. To determine compliance with this permit, results below the mdl will be reported as BDL. Results between the MDL and the PQL shall be reported as an analytical result.

- 9) The conditions for renewal of the permit will be that 90 days prior to expiration of the permit, the Permittee shall provide a analysis of the discharge, including operational schedule and anticipated flows, concentrations and an evaluation of the discharge needs for the following 4 years. Additionally, any anticipated significant operational changes shall be reported at any time there is an anticipated significant change during the course of the agreement.
- The Permittee must verbally notify BCDES within 24 hours of becoming aware of any violation found in any self-monitoring. BCDES will require the Permittee to re-sample every 30 days until the Permittee's discharge is in compliance with limits established in this permit. In addition, the Permittee must submit all effluent and monitoring well data collected in accordance with the self-monitoring requirements in 40 CFR Part 136 (as applicable) or the analytical requirements approved by U.S. EPA pursuant to the U.S. v. Skinner Consent Decree, as appropriate. This includes any samples the County may split with the Permittee.
- This permit allows discharge of up to 324,000 gallons per month from the Skinner Landfill Site. Flows greater than 324,000 gallons per month will be assessed peaking surcharges as established in the County's Sewer Rate Resolution 02-1-103, or any subsequent rate schedule. Additionally, due to the nature of this special discharge, any peaking charges are subject to be billed at the 200% standard discharge fee that is established this Special Permit.
 - Should additional flow need to be discharged from the Skinner Landfill Site, then a letter requesting allocation of additional capacity will need to be sent to the Director. Since groundwater is a prohibited flow except as provided by this Special Permit, then separate approval and agreement will be needed regarding additional ERU allocation.
- 12) BCDES may make an additional 23 ERUs ("Additional ERU") available for Permitee's use with the understanding that the charges for the 23 ERUs will be paid by Permittee at the rate currently in effect at the time of purchase. It is also required that Permittee will surrender to BCDES one or more Additional ERU(s) assigned to Permittee when the groundwater flow from the Skinner Landfill Site decreases such that each Additional ERU/capacity allocation is no longer needed by Permittee. An Additional ERU will be deemed to be no longer needed after a period of two (2) years in which the peak flow in any one month does not exceed 110% of the additional assigned capacity. For example, if the peak monthly flow in 2004 is 450,000 gallons, then each Additional ERU in excess of that needed for the 495,000 gallon capacity allocation would be considered to be an Additional ERU to be surrendered in 2006. For the purposes of determining the surrender of an Additional ERU, a review will be conducted by BCDES and Permittee in January of each year with a surrender of an Additional ERU, if any, to occur in January two (2) years later. Should data during the intervening two (2) years indicate Permittee's need for the Additional ERU, then a letter requesting deferral of the surrender will be submitted to BCDES. Consent for such deferral will not be unreasonably withheld by BCDES. Notwithstanding the ERU review example provided above, at no time shall the Additional ERU review require the Skinner Landfill Site to surrender any of the original 27 ERUs (324,000 gallons per month) authorized under this permit.

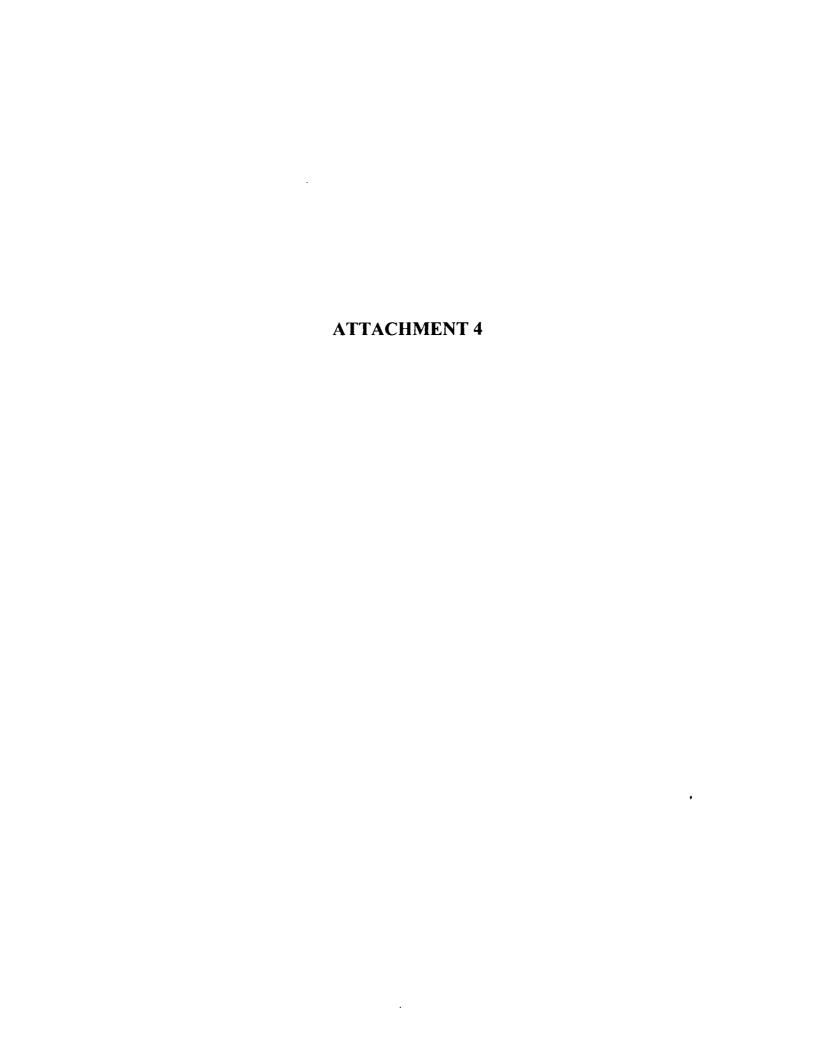


TABLE 7
TARGET COMPOUND LIST

	·	Quantitation Limits (1)
Volatiles	CAS Number	
		Water (ug/L)
l Chloromethane	74-87-3	1.0
2. Bromomethane	74-83-9	1.0
3. Vinyl Chloride	75-01-4	1.0
4. Chloroethane	75-00-3	1.0
5. Methylene Chloride	75-09-2	1.0
3. Mediyiona cincinea	, , , , ,	1.0
6. Acetone	67-64-1	1.0
7. Carbon Disulfide	75-15-0	1.0
8. 1,1-Dichloroethene	75-35-4	1.0
9. 1,1-Dichloroethane	75-35-3	1.0
10. 1,2-Dichloroethane (total)	540-59-0	1.0
11. Chloroform	67-66-3	1.0
12. 1,2-Dichloroethane	107-06-2	1.0
13. 2-Butanone	78-93-3	1.0
14. 1,1,1-Trichloroethane	71-55-6	1.0
15. Carbon Tetrachloride	56-23-5	1.0
16. Bromodichloromethane	75-27-4	1.0
17. 1,2-Dichloropropane	·78-87-5	1.0
18. cis-1,3-Dichloropropene	10061-01-5	1.0
19. Trichloroethene	79-01-6	1.0
20. Dibromochloromethane	124-48-1	1.0
21. 1,1,2-Trichloroethane	79-00-5	1.0
22. Benzene	71-43-2	1.0
23. trans-1,3-Dichloropropene	10061-02-6	1.0
24. Bromoform	75-25-2	1.0
25. 4-Methyl-2-pentanone	108-10-1	1.0
26. 2-Hexanone	591-78-6	1.0
27. Tetrachloroethene	127-18-4	1.0
28. Toluene	108-88-3	1.0
29. 1,1,2,2-Tetrachloroethane	79-34-5	1.0
30. Chlorobenzene	108-90-7	1.0
31. Ethyl benzene	100-41-4	1.0
32. Styrene	100-42-5	1.0
33. Xylenes (total)	1330-20-7	1.0

TABLE 7 (cont.)

TARGET COMPOUND LIST

		Quantitatio	on Limits (1)
			Soil/Sediment
Semi-volatiles (2, 3)	CAS Number	Water (ug/L)	(mg/kg)
34. Phenol	108-95-2	10	330
35. bis(2-Chloroethyl) ether	111-44-4	10	330 ·
36. 2-Chlorophenol	95-57-8	10	330
37. 1,3-Dichlorobenzene	541-73-1	10	330
38. 1,4-Dichlorobenzene	106-46-7	10	330
39. 1,2-Dichlorobenzene	95-50-1	10	330
40. 2-Methylphenol	95-48-7	10	330
41. 2,2-oxybis-			222
(1-Chlororpropane)#	108-60-1	10	330
42. 4-Methylphenol	106-44-5	10	330
43. N-Nitroso-di-n-dipropylamine	621-64-7	10	330
44. Hexachloroethane	67-72-1	10	330
45. Nitrobenzene	98-95-3	10	330
46. Isophorone	78-59-1	10	330
47. 2-Nitrophenol	88-75-5	· 10	330
48. 2,4-Dimethylphenol	105-67-9	10	333
49. bis(2-Chloroethoxy) methane	111-91-1	10	330
50. 2,4-Dichlorophenol	120-83-2	10	330
51. 1,2,4-Trichlorobenzene	120-82-1	10	330
52. Naphthalene	91-20-3	10	330
53. 4-Chloroaniline	106-47-8	10	. 330
54. Hexachlorobutadiene	87-68-3	10	330
55. 4-Chloro-3-methyphenol	59-50-7	10	330
56. 2-Methylynaphthalene	91-57-6	10	330
57. Hexachlorocyclopentadiene	77-47-4	10	330
58. 2,4,6-Trichlorophenol	88-06-2	10	330
59. 2,4,5-Trichlorophenol	95-95-4	25	800
60. 2-Chloronaphthalene	91-58-7	10	330
61. 2-Nitroaniline	88-74-4	25	800
62. Dimethylphthalate	131-11-3	10	330
63. Acenaphthlene	208-96-8	10	330
64. 2,6-Dinitrotoluene	606-20-2	10	330
65. 3-Nitroaniline	99-09-2	50	800
66. Acenaphthene	83-32-9	10	330
67. 2,4-Dinitrophenol	51-28-5	25	800
68. 4-Nitrophenol	100-02-7	25	800
69. Dibenzofuran	132-64-9	10	330
70. 2,4-Dinitrotoluene	121-14-2	10	330
71. Diethylphthalate	84-66-2	10	330
72. 4-Chlorophenyl-phenyl ether	7005-72-3	10	330
73. Fluorene	86-73-7	10	⇒ 330

TABLE 7 - (Cont.)

TARGET COMPOUND LIST

			Quantitation Limits (1)		
Semi-volatiles (2, 3)	Semi-volatiles (2, 3) CAS Number		Soil/Sediment (mg/kg)		
74. 4-Nitroaniline	100-01-6	25	800		
75. 4,6-Dinitro-2-methylphenol	534-52-1	25	800		
76. N-Nitrosodiphenylamine	86-30-6	10	330		
77. 4-Bromophenyl-phenyl ether	101-55-3	10	330		
78. Hexach orobenzene	118-74-1	10	330		
79. Pentachlorophenol	87-86-5	25	800		
80. Phenanthrene	85-01-8	10	330		
81. Anthracene	120-12-7	10	330		
82. Carbazele	86-74-8	10	330		
83. Di-n-butyl phthalate	86-74-2	, 10	330		
84. Fluoranthene	206-44-0	10	330		
85. Pyrene	129-00-0	10	330		
86. Butyl benzyl phthalate	85-68-7	10	330		
87. 3,3'-Dichlorobenzidine	91-94-1	10	330		
88. Benz(a)anthracene	56-55-3	10	333		
89. Chrysene	218-01-9	10	> 330		
90. bis(2-Ethylhexyl)phthalate	l 17-81-7	10	330		
91. Di-n-Octylphthalate	117-84-0	10	330		
92. Benzo(b)fluoranthene	205-99-2	10	330		
93. Benzo(k)fluoranthene	207-08-9	10	330		
94. Benzo(a)pyrene	50-32-8	10	330		
.95. Indeno(1,2,3-cd)pyrene	193-39-5	10	330		
96. Dibenzo(a,h)anthracene	53-70-3	10	330		
97. Benzo(g,h,i)perylene	191-24-2	10	330		

[#] Previously known by the name bis(2-Chloroisopropyl) ether

⁽¹⁾ Quantitation Limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, calculated on dry weight basis, as required by the protocol, will be higher.

TABLE 7 (cont.)
TARGET COMPOUND LIST

		Quantitati	on Limits (1)
Pesticides/Aroclors	CAS Number	Water (ug/L)	Soil/Sediment (mg/kg)
98. alpha-BHC	319-84-6	0.05	1.7
99. beta-BHC	319-85-7	0.05	1.7
100. delta-BHC	319-86-8	0.05	1.7
101. gamma-BHC (Lindane)	58-89-9	0.05	1.7
102. Heptachlor	76-44-8	0.05	1.7
103. Aldrin	309-00-2	0.05	1.7
104. Heptachlor epoxide	1024-57-3	0.05	1.7
105. Endosulfan I	959-98-8	0.05	1.7
106. Dieldrin	60-57-1	0.10	3.3
107. 4,4-DDE	72-55-9	0.10	-3.3
108. Endrin	72-20-8	0.10	3.3
109. Endosulfan II	33213-65-9	0.10	3.3
110. 4,4'-DDD	72-54-8	0.10	3.3
111. Endosulfan sulfate	1031-07-8	0.10	3.3
112. 4,4'-DDT	50-29-3	0.10	3.3
113. Methoxychlor	72-43-5	0.50	17.0
114. Endrin ketone	53494-70-5	0.10	3.3
115. Endrin aldehyde	7421-36-3	0.10	3.3
116. alpha-Chlordane	5103-71-9	0.05	1.7
117. gamma-Chlordane	5103-74-2	0.05	1.7
118. Toxaphene	8001-35-2	5.0	170.0
119. AROCLOR-1016	12674-11-2	1.0	33.0
120. AROCLOR-1221	11104-28-2	. 0.5	67.0
121. AROCLOR-1232	11141-16-5	0.5	33.0
122. AROCLOR-1242	53469-21-9	1.0	33.0
123 AROCLOR-1248	12672-29-6	1.0	33.0
124 AROCLOR-1254	11097-69-1	1.0	33.0
125. AROCLOR-1260	11096-82-5	1.0	33.0

⁽¹⁾ Quantitation Limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, calculated on dry weight basis, as required by the protocol, will be higher.

TABLE 8
TARGET ANALYTE LIST

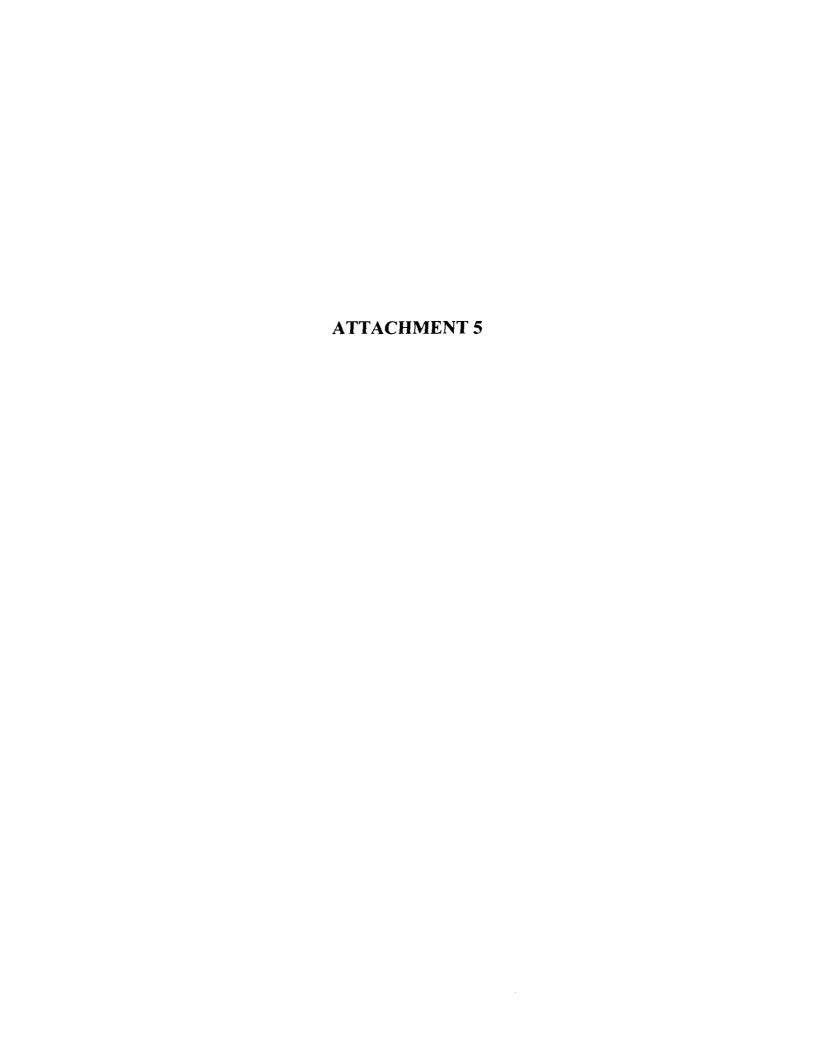
Analyte	Contract Required (1, 2, 3) Detection Limit (ug/L)	
Aluminum	200	
Antimony	60	
Arsenic	10	
Barium	200	
Beryllium	5	
Cadmium	5	
Calcium	5000	
Chromium	10	
Cobalt	50	
Copper	25	
· Iron	100	
Lead	3	
Magnesium	5000	
Manganese	15	
Mercury	0.2	
Nickel	40	
Potassium	5000	
Selenium	5	
Silver	10	
Sodium	5000	
Thallium	10	
Vanadium	.50	
Zinc	20	
Cyanide	10	

(1) Higher detection limits may only be used if the sample concentration exceeds five times the detection limit of the instrument or method in use. The value may be reported even though the instrument or method detection limit may not equal the CRQL. This is illustrated in the example where the value of 220 may be reported even though the instrument detection limit is greater than the CRQL.

For lead:

Method in use = ICP Instrument Detection Limit (IDL) = 40 Sample Concentration = 220 CRQL = 3

- (2) The CRQLs are the instrument detection limits obtained in pure water. The detection limits for samples may be considerably higher depending on the sample matrix.
- (3) The CRQLs for soils = 200 times CRQL's for water.



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BK: 7699 PG: 953

To be recorded with Deed Records - ORC § 317.08

9/15/05

ENVIRONMENTAL COVENANT

This Environmental Covenant is made as of the 3474 day of 34847, 2005, by and among Owners Elsa Skinner-Morgan and David Morgan (as further identified below) and Holders, Elsa Skinner-Morgan and David Morgan (as further identified below) pursuant to Ohio Revised Code ("ORC") §§ 5301.80 to 5301.92 for the purpose of subjecting the Site and the Restricted Area (described below) to the activity and use limitations and to the rights of access described below.

Whereas, pursuant to Section 105 of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9605, the United States Environmental Protection Agency ("EPA"), placed the Skinner Landfill Site ("Site") on the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register, 48 Fed. Reg. 40658 (September 8, 1983); and

Whereas, in a Remedial Action/Feasibility Study (RI/FS) completed on June 4, 1993, EPA found the following contaminants had been released into the soil at the Site: toluene, xylenes, ethylbenzene, 1,1,2-trichloroethane, 1,2-dichlororopane, benzene, naphthalene, 2-methylnapthalene, phenanthrene, bis(2-ethylhexyl)phthalate, benzoic acid, fluoranthene, pyrene, hexachlorobenzene, flourene, phenol, butylbenzlphthalate, 1,3-dichlorobenzene, 1,4-dichlorobenzene, hexachlorobutadiene, acenapthene, benzo(a)anthracene, chrysene, hexachlorocyclopentadiene, heptachlor, endrin ketone, gamma chlordane, antimony, cadmium, lead, silver and thallium. In the same RI/FS, EPA found the following contaminants had been released into the groundwater at the Site: benzene, ethylbenzene, xylenes, phenol, 2-methyl phenol, 4-methyl phenol, acetone, 1,2-dichloroethane, chlorobenzene, 2-hexanone, methylene chloride, toluene, 1,1,2,2-tetrachlorothylene, 1,1,2-trichloroethane, 1,1-dichloroethane, 1,2-dichloroethene, 1,2-dichloroethene, 1,1-dichloroethane, chloroform, trichloroethene, vinyl chloride, 1,3-dichlorobenzene, 1,4-dichlorobenzene, benzoic acid, bis(chloroethyl)ether, and naphthalene; and

Whereas, EPA issued a Record of Decision (ROD) for the Operable Unit Interim Action on September 30, 1992, which provided for Site fencing, and connections to the Butler County public water system for potentially affected local users of groundwater, and groundwater monitoring, and whereas EPA issued a final ROD on June 4, 1993 which called for the construction of a RCRA cap over the waste materials; interception, collection, and treatment of contaminated groundwater; diversion of upgradient groundwater flow, if necessary; monitoring; soil vapor extraction; and institutional controls to limit the future use of the property where remedial construction has occurred and to protect the performance of the remedy, and to prevent the exposure of humans or the environment to contaminants; and

TRANSFER NOT NECESSARY KAY ROGERS,

AUDITOR, BUTLER CO., OHIO

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Whereas on December 9, 1992, a EPA issued a Unilateral Administrative Order to various potentially responsible parties, and on April 2, 2001, a Remedial Action Consent Decree was entered which provided for the implementation of the remedial action selected in the June 4, 1993 ROD, and whereas with the exception of the diversion of the upgradient groundwater (which has not yet been determined to be necessary) and the institutional controls, the remedial action has been implemented at the Site; and '

Whereas, the parties hereto have agreed: 1) to grant a permanent right of access over the Site to the Access Grantees (as hereafter defined) for purposes of implementing, facilitating and monitoring the remedial action, and 2) to impose on the Site activity and use limitations as covenants that will run with the land for the purpose of protecting human health and the environment; and

Now therefore, Owners and EPA agree to the following:

- 1. <u>Environmental Covenant</u>. This instrument is an environmental covenant executed and delivered pursuant to §§ 5301.80 to 5301.92 of the Ohio Revised Code.
- 2. <u>Site; Restricted Area.</u> The three (3) parcels of real property which together contain 78.29 acres located in Union Township, Butler County, Ohio (the "Site") which are subject to the environmental covenants set forth herein are described on Exhibit A attached hereto and hereby by reference incorporated herein. Part of the Site which is subject to certain activity and use limitations in Paragraph 5 below is described on Exhibit B attached hereto and hereby incorporated herein, and is hereafter referred to as the "Restricted Area." The Site is outlined by heavy black line on the copy of the Butler County, Ohio Auditor's tax map (the 'Map") attached hereto as Exhibit C-1 and the Restricted Area is shown by diagonal lines on the copy of the Map attached hereto as Exhibit C-2.
- 3. Owner. Elsa Skinner-Morgan ("Owner") who resides at 8750 Cincinnati Dayton Road, West Chester, Ohio 45069 is the owner of the Site. David Morgan, ("Morgan") of the same address, who is the husband of Owner, joins in this Environmental Covenant in order to subject his dower/courtesy interest and any other interest in the Site which he may now or hereafter hold to the terms of this instrument. Owner and David Morgan are the Settling Owner/Operator Defendants named in the Consent Decree (described in Paragraph 10 below).
- 4. <u>Holders</u>. Elsa Skinner-Morgan and David Morgan, whose address appears in Paragraph 3 above.
 - 5. Activity and Use Limitations on the Restricted Area and on the Site.
 - (a) Owner agrees for herself and her successors in title not to permit the Site to be used in any manner that would interfere with or adversely affect the integrity or protectiveness of the remedial action which has been implemented or which will be implemented pursuant to the Consent Decree unless the written consent of the EPA to such use is first obtained. Owner's agreement to restrict the use of the Site shall include, but not be limited to, not permitting any drilling, digging,

building, or the installation, construction, removal or use of any buildings, wells, pipes, roads, ditches, or any other structures on the Restricted Area unless the written consent of EPA to such use or activity is first obtained. Further, Owner agrees for herself and her successors in title to refrain from bringing, and to refuse to grant permission to any other person to bring, Waste Material or Scrap Metal onto the Site, except in accordance with any federal, state or local permit or the Consent Decree.

- (b) Owner covenants for herself and her successors and assigns, that the Restricted Area, shall be used solely for Commercial/Industrial Activities only in accordance with an EPA-approved plan for re-use of the Restricted Area as required under Paragraph 5(a) and the Restricted Area shall not be used for Residential and Other Prohibited Activities. Owner acknowledges and agrees that the Restricted Area has been remediated only for commercial/industrial uses. The term "Commercial/Industrial Activities" includes: (i) wholesale and retail sales and service activities including, but not limited to retail stores, and automotive fuel, sales and service facilities; (ii) governmental, administrative and general office activities, (iii) manufacturing, processing, and warehousing activities, including, but not limited to, production, storage and sales of durable goods and other non-food chain products; and (iv) activities which are consistent with or similar to the above listed activities; together with related parking areas and driveways, but excludes Residential and Other Prohibited Activities. The term "Residential and Other Prohibited Activities" includes: (i) single and multifamily dwellings and transient residential units; (ii) day care centers and preschools; (iii) public and private elementary and secondary schools;
- (iv) hospitals, assisted living facilities and other extended care medical facilities and medical and dental offices; (v) food preparation and food service facilities, including food stores, restaurants, banquet facilities and other food preparation or sales facilities; and (vi) indoor or outdoor entertainment and recreational facilities.
- (c) Owner covenants for herself and her successors and assigns that there shall be no consumptive use of Site groundwater, either on or off the Site.
- 6. Running with the Land. This Environmental Covenant shall be binding upon the Owner and all assigns and successors in interest, including any Transferee, and shall run with the land, pursuant to ORC § 5301.85, subject to amendment or termination as set forth herein. The term "Transferee," as used in this Environmental Covenant, shall mean any future owner of any interest in the Site or any portion thereof, including, but not limited to, owners of an interest in fee simple, mortgagees, easement holders, and/or lessees.
- 7. Requirements for Notice to EPA Following Transfer of a Specified Interest in, or Concerning Proposed Changes in the Use of, Applications for Building Permits for, or Proposals for any Site Work Affecting Contamination on, the Restricted Area. Neither Owner nor any Holder shall transfer any interest in the Restricted Area or make proposed changes in the use of the Restricted Area, or make applications for building permits for, or proposals for any work in the Restricted Area without first providing notice to EPA and

obtaining any approvals or consents thereto which are required under Sections VII, VIII, X or XIII of the Consent Decree.

- 8. Access to the Site. Pursuant to Section X of the Consent Decree, Owner agrees that EPA and the Settling Generator/Transporter Defendants, their successors and assigns, and their respective officers, employees, agents, contractors and other invitees (collectively, "Access Grantees") shall have and hereby grants to each of them an unrestricted right of access to the Site to undertake the Permitted Uses described in Paragraph 9 below and, in connection therewith, to use all roads, drives and paths, paved or unpaved, located on the Site or off the Site ("off-site") and rightfully used by Owner and Owner's invitees for ingress to or egress from portions of the Site (collectively, "Access Roads"). The Site and the Access Roads are shown on the Survey. The off-site Access Roads referred to in the preceding sentence are located on the parcels described on Exhibits D and E attached hereto. The right of access granted under this Paragraph 8 shall be irrevocable while this Covenant remains in full force and effect. The Settling Generator/Transporter Defendants are named on Exhibit F attached hereto.
- 9. <u>Permitted Uses</u>. The right of access granted under Paragraph 8 of this Environmental Covenant shall provide Access Grantees with access at all reasonable times to the Site, or such other property, for the purpose of conducting any activity related to the Consent Decree or the purchase of the Site, including, but not limited to, the following activities:
 - a) Monitoring the Work;
 - b) Verifying any data or information submitted to the United States or the State;
 - c) Conducting investigations relating to contamination at or near the Site;
 - d) Obtaining samples;
 - e) Assessing the need for, planning, or implementing response actions at or near the Site;
 - f) Implementing the Work pursuant to the Consent Decree;
 - g) Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by Owner or her agents, consistent with Section XXXI (Access to Information) of the Consent Decree;
 - h) Assessing Settling Generator/Transporter Defendants' compliance with the Consent Decree;
 - Determining whether the Site or other property is being used in a manner that is prohibited or restricted or that may need to be prohibited or restricted by or pursuant to the Consent Decree; and

j) Surveying and making soil tests of the Site, locating utility lines, and assessing the obligations which may be required of a Prospective Purchaser (as defined in the Consent Decree) by EPA under the Consent Decree.

10. Administrative Record.

- Owner is the Defendant in an action filed by EPA under federal programs (a) governing environmental remediation of the Site under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9601 et seq. in the United States District Court for the Southern District of Ohio, Western Division, Civil Action No., C-1-00-424 and has executed and delivered a Consent Decree dated April 2, 2001, (the "Consent Decree") settling such lawsuit. A certified copy of the Consent Decree has been recorded in the Office of the Butler County Recorder at OR Book 6658, Pages 413-613. The Consent Decree constitutes an environmental response project as defined by ORC § 5301.80(E) and authorizes and requires certain remedial action to be taken by the Settling Generator/Transporter Defendants. On June 4, 1993, EPA issued a Record of Decision (ROD) which set forth EPA's determination of the appropriate remedial action to be implemented at the Site to address Site contamination. Pursuant to this ROD, EPA approved a Remedial Design and Remedial Action work plan which has been implemented as described in the fourth "Whereas" clause at the beginning of this instrument. EPA's ROD was based upon an administrative record. Copies of the EPA administrative record for the Skinner Landfill Site are maintained at the following locations: EPA Region 5; Superfund Records Center (7th Floor); 77 W. Jackson; Chicago, Illinois 60604; Union Township Library, 7900 Cox Road, West Chester, Ohio 45069; and Union Township Hall, 9113 Cincinnati-Dayton Road, West Chester, Ohio 45069.
- (b) Under Section X, Paragraphs 27 and 28 of the Consent Decree, Owner has agreed to provide the institutional controls with respect to the Site that are set forth in this Environmental Covenant. Owner has executed and delivered this Environmental Covenant to satisfy and implement her agreements to provide such institutional controls under the Consent Decree and as herein provided. All capitalized terms in this Environmental Covenant which are not defined herein shall have the same meaning as set forth in the Consent Decree or in Sections 5301.80 to 5301.90 Ohio Revised Code.
- 11. <u>Notice upon Conveyance</u>. Each instrument hereafter conveying any interest in the Site or Restricted Area or any portion of the Site or Restricted Area shall contain a notice of the activity and use limitations, and grants of access set forth in the Environmental Covenant, and provide the recorded location of this Environmental Covenant. For instruments conveying any interest in the Site or any portion thereof other than the Restricted Area, the notice shall be

substantially in the form set forth in Exhibit G. For instruments conveying any interest any interest in the Restricted Area or any portion thereof, the notice shall be substantially in the form set forth in Exhibit H.

12. Amendments; Early Termination. This Environmental Covenant may be modified or amended or terminated while Owner owns the property only by a writing signed by Owner and, EPA with the formalities required for the execution of a deed in Ohio which is recorded in the Office of the Recorder of Butler County, Ohio. Upon transfer of all or any portion of the Site, Owner waives any rights that she might otherwise have under Section 5301.90 of the Ohio Revised Code to withhold her consent to any amendments, modifications, or termination of this Environmental Covenant, to the extent that she has transferred her interest in that portion of the Site affected by said modification, amendment or termination. The rights of Owner's successors in interest as to a modification, amendment or termination of this Environmental Covenant are governed by the provisions of Section 5301.90 of the Ohio Revised Code.

13. Other Matters.

- (a) Representations and Warranties of Owner and Morgan. Owner and Morgan represent and warrant; that Owner is the sole owner of the Site; that Owner holds fee simple title to the Site which is free, clear and unencumbered except for the Consent Decree; that Owner and Morgan have the power and authority to make and enter into this Agreement as Owner and Holder, to grant the rights and privileges herein provided and to carry out all obligations of Owner, Morgan and Holder hereunder; that this Agreement has been executed and delivered pursuant to the Consent Decree; and, that this Agreement will not materially violate or contravene or constitute a material default under any other agreement, document or instrument to which Owner or Morgan is a party or by which Owner or Morgan may be bound or affected.
- (b) Right to Enforce Agreement Against Owner and Morgan; Equitable Remedies. In the event that Owner, Morgan or any other person should attempt to deny the rights of access granted under Paragraph 8 or should violate the restrictions on use of the Site set forth in Paragraph 5, then, in addition to any rights which EPA may have under the Consent Decree. EPA or any Settling Generator/Transporter Defendant that is adversely affected by each denial (for example, any Settling Generator/Transporter Defendant that is prevented from conducting its remedial obligations under the Consent Decree) or by such violation shall have the right to immediately seek an appropriate equitable remedy and any court having jurisdiction is hereby granted the right to issue a temporary restraining order and/or preliminary injunction prohibiting such denial of access or use in violation of restrictions upon application by EPA or by such adversely affected Settling Generator/Transporter Defendant without notice or posting bond. Owner and each subsequent owner of the Site by accepting a deed thereto or to any part thereof waives all due process or

- other constitutional right to notice and hearing before the grant of a temporary restraining order and/or preliminary injunction pursuant to this Subsection 13(b).
- (c) Future Cooperation; Execution of Supplemental Instruments. Owner agrees to cooperate fully with EPA and/or the Settling Generator/Transporter Defendants and to assist them in implementing the rights granted them under this Environmental Covenant and, in furtherance thereof, agrees to execute and deliver such further documents as may be requested by EPA to supplement or confirm the rights granted hereunder.
- (d) <u>Cumulative Remedies; No Waiver</u>. All of the rights and remedies set forth in this Environmental Covenant or otherwise available at law or in equity are cumulative and may be exercised without regard to the adequacy of, or exclusion of, any other right, remedy or option available hereunder or under the Consent Decree or at law. The failure to exercise any right granted hereunder, to take action to remedy any violation by Owner or Morgan of the terms hereof or to exercise any remedy provided herein shall not be deemed to be a waiver of any such right or remedy and no forbearance on the part of EPA and no extension of the time for performance of any obligations of Owner or Morgan hereunder shall operate to release or in any manner affect EPA's rights hereunder.
- (e) <u>Severability</u>. If any provision of this Environmental Covenant is found to be unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired.
- (f) Recordation. Within thirty (30) days after the date of the final required signature upon this Environmental Covenant, Owner shall file this Environmental Covenant for recording, in the same manner as a deed to the Site, with the Butler County Recorder's Office.
- (g) <u>Effective Date</u>. The effective date of this Environmental Covenant shall be the date upon which the fully executed Environmental Covenant has been recorded as a deed record for the Site with the Butler County Recorder.
- (h) <u>Distribution of Environmental Covenant/Other Notices</u>. The Owner shall distribute a file-stamped and date-stamped copy of the reorded Environmental Covenant to: Ohio EPA, Butler County, each person holding a recorded interest in the Site, and the Settling Generator/Transporter Defendants. All notices, requests, demands or other communications required or permitted under this Environmental Covenant shall be given in the manner and with the effect set forth in the Consent Decree.

- (f) <u>Notices</u> All notices, requests, demands or other communications required or permitted under this Environmental Covenant shall be given in the manner and with the effect set forth in the Consent Decree.
- (g) <u>Governing Law</u>. This Environmental Covenant shall be construed according to and governed by the laws of the State of Ohio and the United States of America.
- (h) <u>Captions</u>. All paragraph captions are for convenience of reference only and shall not affect the construction of any provision of this Environmental Covenant.
- (i) <u>Time of the Essence</u>. Time is of the essence of each and every performance obligation of Owner and Morgan under this Environmental Covenant.

[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, Owner, Morgan and EPA have executed and

delivered this Environmental Covenant as of the date first a	bove written.
OWNE	ER
Elsa M	Skinner-Morgan, a/k/a Skinner
	Morgan Morgan
STATE OF OHIO) COUNTY OF BILLER)	
The foregoing instrument was acknowled the property of the foregoing instrument was acknowled and husband. The foregoing instrument was acknowled to the property of the prop	mothy Econ
On behalf of th United States I By:	TES OF AMERICA ne Administrator of the Environmental Protection Agency Chal C Kal Richard C. Karl, Director, Superfund Division, Region 5
STATE OF ILLINOIS)) SS. COUNTY OF COOK)	1 1 1 6 4 4 4 4 6
The foregoing instrument was acknowle JANNARY, 2005, by Richard C. Karl, Director, Superfur States Environmental Protection Agency, on behalf of the U	nd Division, Region 5 of the United

Official Seal Joseph H Kruth Notary Public State of Illinois My Commission Expires 07/24/06

EXHIBIT A

Legal Description of the "Site"

PARCEL I

Situated in and being in Section 22, Town 3, Range 2 and in Union Township, Butler County, Ohio, and is bounded and described as follows:

Beginning at the Northwest corner of the Southeast Quarter of said Section 22, Town 3, Range 2; thence along the north line of the southeast quarter section, South 86° 09' East, 300.40 feet to an old stone; thence North 4° 18' 45" East, 726.56 feet to an iron pipe; thence South 85° 57' 45" East, 406.26 feet to the old right of way for the C.C.C. & St. L. Railroad; thence along said old right of way line South 15° 10' 45" East, 163.00 feet to a point in the present right of way line for the C.C.C. & St. L. Railroad; thence along said present Railroad right of way line, South 11° 49' West, 1865.17 feet to an iron pipe; thence South 89° 03' West, 512.03 feet; (witnessed by an iron pipe, North 89° 03' East, 2.00 feet); thence North 3° 59' East, 1318.92 feet to an iron pipe and the point of beginning; containing 24.852 acres of land, more or less.

M5610-023-000-015

PARCEL II

Situate in Section 22, Town 3, Range 2, Union Township, Butler County, Ohio and being part of the property conveyed to Elsa M. Skinner by deed recorded in Deed Book 1236, Page 337, in the Butler County Recorder's Office, and being more particularly described as follows:

Commencing at the intersection of the west line of Section 22 and the half section line; thence along said half section line, South 87° 01' 55" East, 982.76 feet to the centerline of Cincinnati-Dayton Road; thence leaving said half section line and along said centerline, South 39° 59' 08" West, 861.28 feet to the western most corner of said Skinner lands; thence along said centerline, North 39° 59' 08" East, 198.15 feet to the point of beginning of this tract; thence along said centerline, North 39° 59' 08" East, 263.98 feet; thence leaving said centerline and with said Skinner lines, South 50° 00' 52" East, 363.10 feet; thence North 39° 59' 08" East, 171.00 feet; thence North 29° 42' 05" East, 279.68 feet; thence South 50° 02' 05" East, 175.77 feet; thence North 23° 00' 00" East, 328.48 feet; thence South 86° 06' 05" East, 66.89 feet; thence South 85° 38' 15" East, 292.00 feet; thence by new division line, South 40° 49' 19" West, 848.97 feet; thence South 35° 31' 36" West, 225.23 feet; thence South 36° 05' 41" West, 269.24 feet; thence South 43° 12' 11" West, 99.54 feet; thence North 46° 47' 50" West, 339.63 feet; thence North 39° 59' 08" East, 188.51 feet; thence North 50° 00' 52" West, 363.10 feet to the said centerline and the point of beginning of this parcel.

Containing 11.507 acres of land, more or less.

A plat of survey prepared by Joseph M. Allen Co. is recorded in Volume 22, Page 175 of the Butler County Engineer's Records of Land Surveys.

PARCEL III

Situate in Section 22, Town 3, Range 2, Union Township, Butler County, Ohio and being part of the property conveyed to Elsa M. Skinner by deed recorded in Deed Book 1236, Page 337 in the Butler County Recorder's Office, and being more particularly described as follows:

Commencing at the intersection of the west line of Section 22 and the half section line; thence along said half section line, South 87° 01' 55" East, 982.76 feet to the centerline of Cincinnati-Dayton Road; thence leaving said half section line and along said centerline, South 39° 59' 08" West, 861.28 feet to the westernmost corner of said Skinner lands, being the point of beginning of this tract; thence along said centerline, North 39° 59' 08" East, 198.15 feet; thence by new division line, South 50° 00' 52" East, 363.10 feet; thence South 39° 59' 08" West, 188.51 feet; Thence South 46° 47' 50" East, 339.63 feet; thence North 43° 12' 11" East, 99.54 feet; thence North 36° 05' 41" East, 269.24 feet; thence North 35° 31' 36" East, 225.23 feet; thence North 40° 49' 19" East, 848.97 feet to said Skinner line; thence with said Skinner line, South 85° 38' 15" East, 802.73 feet; thence South 4° 16' 10" West, 1319.05 feet; thence South 89° 08' 10" West, 549.50 feet to the east line of Ray A. Skinner as conveyed by deed recorded in Deed Book 1475, Page 656 in the Butler County Recorder's Office; thence with said Ray Skinner line, North 7° 08' 10" East, 58.61 feet; thence North 75° 27' 20" West, 225.36 feet; thence South 6° 48' 51" West, 118.98 feet to said Elsa Skinner line; thence with said line, South 82° 52' 15" West, 530.95 feet; thence North 5° 52' 15" West, 108.95 feet; thence North 46° 47' 50" West, 1007.50 feet to the centerline of Cincinnati-Dayton Road and the point of beginning; excepting therefrom the 0.401 acres of land of Charles S. and Rosella M. Wallen as conveyed by deed recorded in Deed Book 721, Page 251 of the Butler County Recorder's Office.

Containing 41.938 acres of land, more or less.

A plat of survey prepared by Joseph M. Allen Co. is recorded in Volume 22, Page 175 of the Butler County Engineer's Records of Land Surveys.

M5610-023-000-055

Property Address:

8750 Cincinnati Dayton Road, West Chester, OH

Tax ID No.:

M5610-023-000-015; -025; -055

EXHIBIT B

Legal Description of the "Restricted Area"

PARCEL I

Situated in and being in Section 22, Town 3, Range 2 and in Union Township, Butler County, Ohio, and is bounded and described as follows:

Beginning at the Northwest corner of the Southeast Quarter of said Section 22, Town 3, Range 2; thence along the north line of the southeast quarter section, South 86° 09' East, 300.40 feet to an old stone; thence North 4° 18' 45" East, 726.56 feet to an iron pipe; thence South 85° 57' 45" East, 406.26 feet to the old right of way for the C.C.C. & St. L. Railroad; thence along said old right of way line South 15° 10' 45" East, 163.00 feet to a point in the present right of way line for the C.C.C. & St. L. Railroad; thence along said present Railroad right of way line, South 11° 49' West, 1865.17 feet to an iron pipe; thence South 89° 03' West, 512.03 feet; (witnessed by an iron pipe, North 89° 03' East, 2.00 feet); thence North 3° 59' East, 1318.92 feet to an iron pipe and the point of beginning; containing 24.852 acres of land, more or less.

Excepting from the above described 24.852 acre parcel that part thereof which adjoins the centerline of Cincinnati-Dayton Road to a depth of 702.34 feet measured southeasterly from and at a right angle to the centerline of Cincinnati-Dayton Road.

PARCEL III

Situate in Section 22, Town 3, Range 2, Union Township, Butler County, Ohio and being part of the property conveyed to Elsa M. Skinner by deed recorded in Deed Book 1236, Page 337 in the Butler County Recorder's Office, and being more particularly described as follows:

Commencing at the intersection of the west line of Section 22 and the half section line; thence along said half section line, South 87° 01' 55" East, 982.76 feet to the centerline of Cincinnati-Dayton Road; thence leaving said half section line and along said centerline, South 39° 59' 08" West, 861,28 feet to the westernmost corner of said Skinner lands, being the point of beginning of this tract; thence along said centerline, North 39° 59' 08" East, 198.15 feet; thence by new division line, South 50° 00' 52" East, 363.10 feet; thence South 39° 59' 08" West, 188.51 feet; thence South 46° 47' 50" East, 339.63 feet; thence North 43° 12' 11" East, 99.54 feet; thence North 36° 05' 41" East, 269.24 feet; thence North 35° 31' 36" East, 225.23 feet; thence North 40° 49' 19" East, 848.97 feet to said Skinner line; thence with said Skinner line, South 85° 38' 15" East, 802.73 feet; thence South 4° 16' 10" West, 1319.05 feet; thence South 89° 08' 10" West, 649.50 feet to the east line of Ray A. Skinner as conveyed by deed recorded in Deed Book 1475, Page 656 in the Butler County Recorder's Office; thence with said Ray Skinner line, North 7° 08' 10" East, 58.61 feet; thence North 75° 27' 20" West, 225.36 feet; thence South 6° 48' 51" West, 118.98 feet to said Elsa Skinner line; thence with said line, South 82° 52' 15" West, 530.95 feet; thence North 5° 52' 15" West, 108.95 feet; thence North 46° 47' 50" West, 1007.50 feet to the centerline of Cincinnati-Dayton Road and the point of beginning; excepting therefrom

the 0.401 acres of land of Charles S. and Rosella M. Wallen as conveyed by deed recorded in Deed Book 721, Page 251 of the Butler County Recorder's Office.

Containing 41.938 acres of land, more or less.

A plat of survey prepared by Joseph M. Allen Co. is recorded in Volume 22, Page 175 of the Butler County Engineer's Records of Land Surveys.

M5610-023-000-055

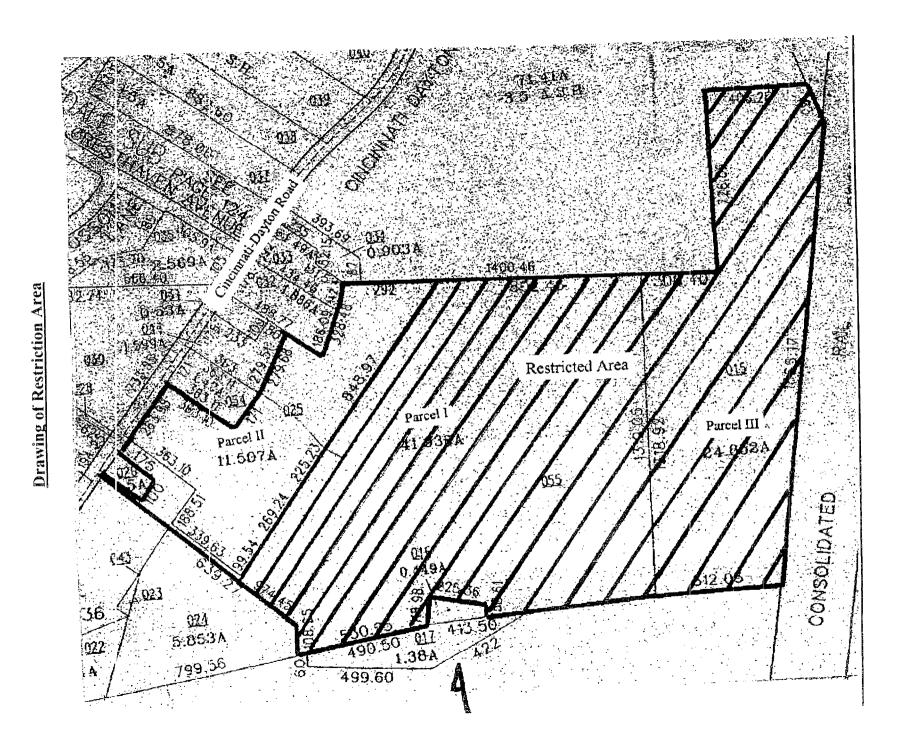
Property Address:

8750 Cincinnati Dayton Road, West Chester, OH

Tax ID No.:

M5610-023-000-015; -025; -055

P. A. Parcel I 41,938 A Parcel II Parcel III 11.507A 24.852A CONSOLIDATED 512,03 36 024 5.853A 022 A 490.50 011 1.38A 799,55 499.60



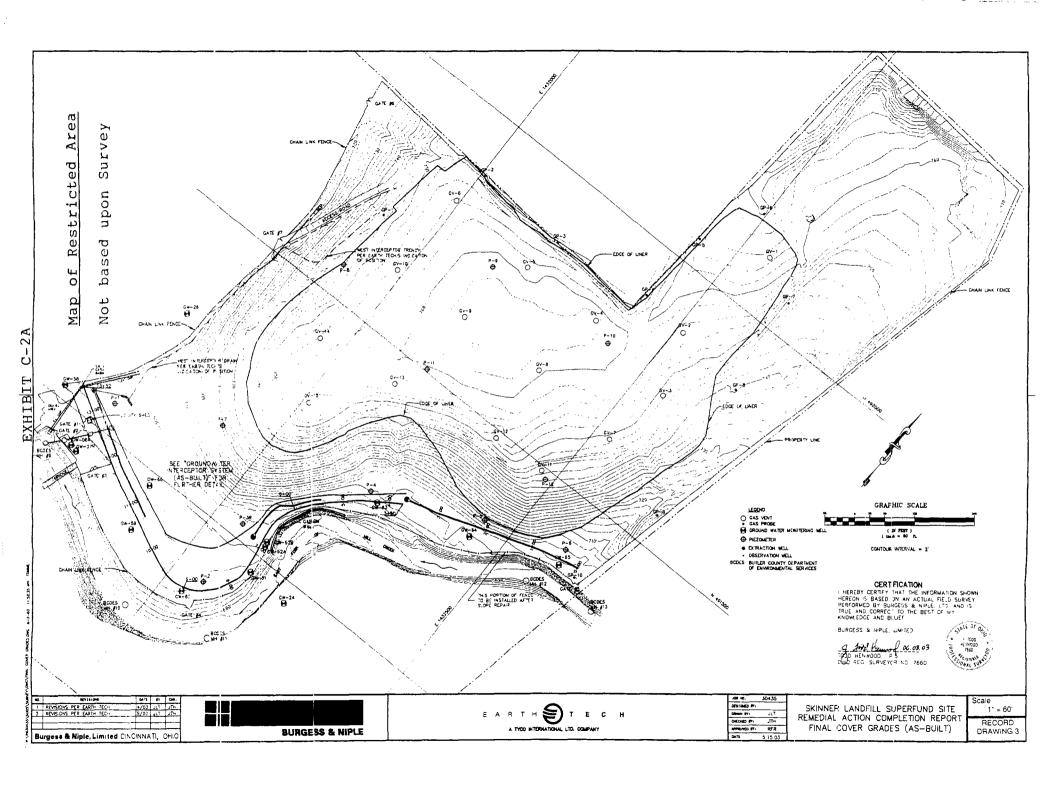


EXHIBIT D

Legal Description of 1.38-Acre Access Easement Parcel

Being part of lot number four (4) and part of Lot Number Eleven (11) in Section 22, Town 3, Range 2, in Union Township, Butler County, Ohio, and as recorded in Land Book #1, page 62, of the Butler County Ohio Recorder's Records, and more particularly described as follows:

Lying and being in Section 22, Town 3, Range 2, in Union Township, Butler County, Ohio, and beginning at the northeast corner of said lot #4, thence north 83-1/2 degrees east a distance of four hundred and thirteen and five-tenths (413.5) feet to a point, thence south 70 degrees west a distance of four hundred and twenty-two (422) feet to a point, thence south 86-1/2 degrees west a distance of two hundred and thirty nine and six-tenths (239.6) feet to a point, thence south 88 degrees west a distance of two hundred and sixty feet to a point; thence north ½ degree west a distance of sixty (60) feet to a point, thence north 87 degrees east a distance of four hundred and nanety and five-tenths (490.5) feet to the place of beginning, containing one and thirty-eight hundredths (1.38) acres of land; being the same premises conveyed by Anna Mae Skinner to William J. Skinner by deed dated February 14, 1938, recorded in Volume 327 page 137, Butler County, Ohio Deed Records.

EXHIBIT E

Legal Description of .449-Acre Access Easement Parcel

Situated and lying in Section 22, Town 3, Range 2, Union Township, Butler County, Ohio. Commencing at the southwest corner of Section 22, Town 3, Range 2 in Union Township, thence rorth 1 degree 45' east 1042.8 feet; thence north 78 degrees 00' east 1798.5 feet to a stone at the southwest corner of tract herein transferred; thence north 83 degrees 30' east 225 feet to an iron pin; thence north 1 degree 30' east 58.61 feet to an iron pipe; thence north 81 degrees 05-1/2' west 225.36 feet to a stone; thence south 2 degrees 25' west to the place of beginning, containing .449 of an acre.

EXHIBIT F

APPENDIX D

SETTLING GENERATOR/TRANSPORTER DEFENDANTS

Anchor Hocking Corporation
Chemical Leaman
The Dow Chemical Company
Ford Motor Company
Formica Corporation
Henkel Corporation
GE Aircraft Engines
General Motors Corporation
King Wrecking Company, Inc.
King Container Services, Inc.
Monsante Company
Oxy USA Inc
Velsicol Chemical Corporation

EXHIBIT G

Notice upon Conveyance of Site or any Portion thereof other than the Restricted Area

THE INTEREST (CONVEYED HE	REBY IS SU	BJECT TO	A CONSEN	T DECREE	DATED
APRIL 2, 2001, W	HICH WAS RE	CORDED IN	THE OFFI	CE OF THE	BUTLER (COUNTY
RECORDER, OR	BOOK 6658, Pag	ges 413-613,	AND WHIC	H RESTRIC	TS THE IN	NTEREST
CONVEYED AS	SET FORTH	IN THIS	NOTICE A	AND AN	ENVIRON	MENTAL
COVENANT, DA	TED	, 200_, R	ECORDED	IN THE DI	EED OR C	FFICIAL
RECORDS OF TH	IE BUTLER CO	UNTY RECO	ORDER ON		دد	200 <u>,</u> in
BOOK, P	age, TI	HE ENVIRO	NMENTAL	COVENAN	T CONTA	NS THE
FOLLOWING AC	TIVITY AND US	E LIMITATI	ONS AND A	ACCESS RIC	HTS:	

Activity and Use Limitations on the Site.

- The Site shall not be used in any manner that would interfere with or adversely affect the integrity or protectiveness of the remedial action which has been implemented or which will be implemented pursuant to the Consent Decree unless the written consent of the EPA to such use is first obtained. No person shall bring any Waste Material or Scrap Metal onto the Site, except in accordance with any federal, state or local permit or the Consent Decree.
- (b) There shall be no consumptive use of Site groundwater, either on or off the Site.

Access to the Site. Pursuant to Section X of the Consent Decree and the Environmental Covenant, EPA and the Settling Generator/Transporter Defendants, their successors and assigns, and their respective officers, employees, agents, contractors and other invitees (collectively, "Access Grantees") shall have an unrestricted right of access to the Site to undertake the Permitted Uses described below and, in connection therewith, to use all roads, drives and paths, paved or unpaved, located on the Site or off the Site ("off-site") and the "Access Roads." The Site and the Access Roads are shown on the Survey, which is recorded in Volume 22, Page 175 of the Butler County Engineer's Records of Land Surveys. The off-site Access Roads referred to in the preceding sentence are located on the parcels described on Exhibits D and E of the Environmental Covenant referred to above, from which this Notice proceeds. The right of access set forth above shall be irrevocable while the Environmental Covenant remains in full force and effect. The Settling Generator/Transporter Defendants are named on Exhibit F of the Environmental Covenant.

<u>Permitted Uses</u>. The right of access granted under the Environmental Covenant shall provide Access Grantees with access at all reasonable times to the Site, or such other property, for the purpose of conducting any activity related to the Consent Decree or the purchase of the Site, including, but not limited to, the following activities:

a) Monitoring the Work;

- b) Verifying any data or information submitted to the United States or the State:
- c) Conducting investigations relating to contamination at or near the Site;
- d) Obtaining samples;
- e) Assessing the need for, planning, or implementing response actions at or near the Site;
- f) Implementing the Work pursuant to the Consent Decree;
- g) Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by Owner or her agents, consistent with Section XXXI (Access to Information) of the Consent Decree;
- h) Assessing Settling Generator/Transporter Defendants' compliance with the Consent Decree;
- i) Determining whether the Site or other property is being used in a manner that is prohibited or restricted or that may need to be prohibited or restricted by or pursuant to the Consent Decree; and
- j) Surveying and making soil tests of the Site, locating utility lines, and assessing the obligations which may be required of a Prospective Purchaser (as defined in the Consent Decree) by EPA under the Consent Decree.

EXHIBIT H

Notice upon Conveyance of Restricted Area or any Portion thereof

THE INTEREST CONVEYED HE	REBY IS SUBJECT TO) A CONSENT DECREE DATEI
APRIL 2, 2001, WHICH WAS REC	CORDED IN THE OFF	ICE OF THE BUTLER COUNTY
RECORDER, OR BOOK 6658, Pag	es 413-613, AND WHI	CH RESTRICTS THE INTERES?
CONVEYED AS SET FORTH	IN THIS NOTICE,	AND AN ENVIRONMENTAL
COVENANT, DATED	_, 200_, RECORDED I	N THE OFFICIAL RECORDS OF
THE BUTLER COUNTY RECORD	ER ON	, 200_, in BOOK
Page, THE ENVIRONM		
ACTIVITY AND USE LIMITATION	NS AND ACCESS RIGH	HTS:

Activity and Use Limitations on the Restricted Area.

- (a) The Restricted Area shall not be used in any manner that would interfere with or adversely affect the integrity or protectiveness of the remedial action which has been implemented or which will be implemented pursuant to the Consent Decree unless the written consent of the EPA to such use is first obtained. There shall be no drilling, digging, building, or the installation, construction, removal or use of any buildings, wells, pipes, roads, ditches, or any other structures on the Restricted Area unless the written consent of EPA to such use or activity is first obtained. No person shall bring any Waste Material or Scrap Metal onto the Restricted Area, except in accordance with any federal, state or local permit or the Consent Decree.
- The Restricted Area, shall be used solely for Commercial/Industrial Activities only in accordance with an EPA-approved plan for re-use of the Restricted Area as required under Paragraph 5(a) of the Environmental Covenant and the Restricted Area shall not be used for Residential and Other Prohibited Activities. The Restricted Area has been remediated only commercial/industrial uses. The term "Commercial/Industrial Activities" includes: (i) wholesale and retail sales and service activities including, but not limited to retail stores, and automotive fuel, sales and service facilities; (ii) governmental, administrative and general office activities, (iii) manufacturing, processing, and warehousing activities, including, but not limited to, production, storage and sales of durable goods and other non-food chain products; and (iv) activities which are consistent with or similar to the above listed activities; together with related parking areas and driveways, but excludes Residential and Other Prohibited Activities. The term "Residential and Other Prohibited Activities" includes: (i) single and multi-family dwellings and transient residential units; (ii) day care centers and preschools; (iii) public and private elementary and secondary schools; (iv) hospitals, assisted living facilities and other extended care medical facilities and medical and dental offices: (v) food preparation and food service facilities, including food stores, restaurants, banquet

facilities and other food preparation or sales facilities; and (vi) indoor or outdoor entertainment and recreational facilities.

(c) There shall be no consumptive use of Restricted Area groundwater, either on or off the Restricted Area.

Requirements for Notice to EPA Following Transfer of a Specified Interest in, or Concerning Proposed Changes in the Use of, Applications for Building Permits for, or Proposals for any Site Work Affecting Contamination on, the Restricted Area. No transferee in interest may make changes in the use of the Restricted Area, or may make applications for building permits for, or proposals for any work in the Restricted Area without first providing notice to EPA and obtaining any approvals or consents thereto which are required under Sections VII, VIII, X or XIII of the Consent Decree.

Access to the Restricted Area. Pursuant to Section X of the Consent Decree and the Environmental Covenant, EPA and the Settling Generator/Transporter Defendants, their successors and assigns, and their respective officers, employees, agents, contractors and other invitees (collectively, "Access Grantees") shall have an unrestricted right of access to the Restricted Area to undertake the Permitted Uses described below and, in connection therewith, to use all roads, drives and paths, paved or unpaved, located on the Restricted Area or off the Restricted ("off-site") and the Access Roads. The Site and the Access Roads are shown on the Survey which is recorded in Volume 22, Page 175 of the Butler County Engineer's Records of Land Surveys. The right of access granted under this Paragraph shall be irrevocable while this Environmental Covenant remains in full force and effect. The Settling Generator/Transporter Defendants are named on Exhibit F of the Environmental Covenant.

<u>Permitted Uses</u>. The right of access granted under the Environmental Covenant shall provide Access Grantees with access at all reasonable times to the Restricted Area, or such other property, for the purpose of conducting any activity related to the Consent Decree or the purchase of the Restricted Area, including, but not limited to, the following activities:

- a) Monitoring the Work;
- b) Verifying any data or information submitted to the United States or the State;
- c) Conducting investigations relating to contamination at or near the Restricted Area;
- d) Obtaining samples;
- e) Assessing the need for, planning, or implementing response actions at or near the Restricted Area;
- f) Implementing the Work pursuant to the Consent Decree;

- g) Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by Owner or her agents, consistent with Section XXXI (Access to Information) of the Consent Decree;
- h) Assessing Settling Generator/Transporter Defendants' compliance with the Consent Decree;
- i) Determining whether the Restricted Area or other property is being used in a manner that is prohibited or restricted or that may need to be prohibited or restricted by or pursuant to the Consent Decree; and
- j) Surveying and making soil tests of the Restricted Area, locating utility lines, and assessing the obligations which may be required of a Prospective Purchaser (as defined in the Consent Decree) by EPA under the Consent Decree.

ATTACHMENT 6

Site Inspection Checklist

I. SITE INF	ORMATION
Site name: JKinner Lindfill	Date of inspection: //29/09
Location and Region: West Chester of Region 5	EPAID: 0HD063763714
Agency, office, or company leading the five-year review:	Weather/temperature: Clanky 22°
Access controls	Monitored natural attenuation Groundwater containment Vertical barrier walls
Attachments: Inspection team roster attached	☐ Site map attached
II. INTERVIEWS	(Check all that apply)
1. O&M site manager	e no
2. O&M staff Alex Mag. Name Interviewed Fat site at office by phone Phone Problems, suggestions: Report attached	e no

Local regulatory authorities and response agencies (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.				
Agency Chick Mellon Name Problems: suggestions; □ Report attached	Froised Manager Title			
Agency	Title	Date Phone no.		
Agency	Title	Date Phone no.		
Agency Contact Name Problems; suggestions; Report attached				
Other interviews (optional) Report attach				

	III. ON-SITE DOCUMEN	NTS & RECORDS VERIFIED (C	heck all that apply	у)
1.	O&M Documents ☐ O&M manual ☐ As-built drawings ☐ Maintenance logs Remarks	☐ Readily available ☐ Up to ☐ Readily available ☐ Readily available	Up to date	DN/A DN/A
2.	Site-Specific Health and Safety P Cont.ngency plan/emergency res Remarks	sponse plan Readily available		ØN/A □N/A
3.	O&M and OSHA Training Recor Remarks	rds □ Readily available	☐ Up to date	G√N/A
4.		☐ Readily available ☐ Readily available ☐ Readily available ☐ Up to ☐ Readily available	☐ Up to date of date ☐ N/A	□ N/A □ N/A □ N/A
5.	Remarks	☐ Readily available ☐ Up to		
6.	Settlement Monument Records	☐ Readily available	☐ Up to date	□ √ √/A.
7.	Groundwater Monitoring Record	ds □ Readily available	□ Up to date	΄/A.
8.	Leachate Extraction Records Remarks	□ Readily available	□ Up to date	Ø√A
9.	Discharge Compliance Records ☐ Air ☐ Water (effluent) Remarks	□ Readily available □ Readily available	□ Up to date □ Up to date	□ N/A ☑ N/A
10.	Daily Access/Security Logs Remarks	☐ Readily available	☐ Up to date	Ū N /A

			IV. O&M COSTS	
1.	O&M Organization ☐ State in-house ☐ PRP :n-house ☐ Federal Facility ☐ Other	in-house	☐ Contractor for State Contractor for PRP Contractor for Fede	ral Facility
2.	O&M Cost Record ☐ Readily available ☐ Funding mechan Original O&M cost	e		
	From Date From Date From Date From Date Date	Date Date Date Date Date Date Date Date	Total cost Total cost Total cost Total cost Total cost	☐ Breakdown attached
3. A. Fe	Describe costs and	reasons:		OLS Applicable \(\sim \text{N/A} \)
1.	Fencing damaged Remarks	□ Location	on shown on site map	Gates secured DN/A
B. O	ther Access Restriction Signs and other se Remarks	curity measures	,	nown on site map

C. I	nstitutional Controls (ICs)			
1.	Site conditions imply IC	's not properly implemented 's not being fully enforced		3No □ N/A
	Type of monitoring (e.g. Frequency Quarter)	self-reporting, drive by) Self-1 terly y PRP 1 Kar Fraged Ma	eportmy	
	Contact <u>Loa</u> Ran	e Fried Ma	nasevDate	(359 1442 - 23il Phone no.
	Reporting is up-to-date Reports are verified by	the lead agency	Yes [□ No □ N/A □ No □ N/A
	Specific requirements in Violations have been repother problems or suggestions.		met ☐Yes [
2.	Adequacy	☐ ICs are adequate ☐ ICs are	inadequate	□ N/A
D. G	Remarks			
1.		☐ Location shown on site map	No vandalism e	vident
2.	Land use changes on si Remarks	ite 🗷 N/A		
3.	Land use changes off s Remarks	ite 🗹 N/A		
		VI. GENERAL SITE CONDITION	ONS	
A. R	Roads Applicable	□ N/A		
1.	Roads damaged Remarks	☐ Location shown on site map	Roads adequate	□ N/A.

	ther Site Conditions	
	Remarks	
	•	
	VII. LAN	DFILL COVERS Applicable Applicable
 . L	andfill Surface	2. Indiana de la companya del companya del companya de la companya
	Settlement (Low spots)	Denth
	Remarks Site cover	It to see coser
		☐ Location shown on site map Cracking not evident Depths
	Remarks Same M	uark as above
	Erosion Areal extent	☐ Location shown on site map ☐ Erosion not evident
	Remarks Sawere	Mark as a buse
	Holes	☐ Location shown on site map ☐ Holes not evident
	Areal extent	Depth
		rass Cover properly established No signs of stre
•	☐ Trees Shrubs (indicate size an Remarks Square	remark us above
	Alternative Cover (armored r	remark us above
	Alternative Cover (armored r Remarks Bulges	ock, concrete, etc.) IN/A □ Location shown on site map ■Bulges not evident
	Alternative Cover (armored r Remarks Bulges	ock, concrete, etc.) IN/A □ Location shown on site map ■Bulges not evident
	Alternative Cover (armored r Remarks Bulges	ock, concrete, etc.) BN/A Description Location shown on site map Bulges not evident
	Alternative Cover (armored r Remarks Bulges Areal extent Remarks Same year	ock, concrete, etc.) SN/A Location shown on site map Bulges not evident Height May k us alore
	Alternative Cover (armored r Remarks Bulges Areal extent Remarks Wet Areas/Water Damage	ock, concrete, etc.) IN/A Location shown on site map Bulges not evident Height My K us alexe
	Alternative Cover (armored r Remarks Bulges Areal extent Remarks Wet Areas/Water Damage Wet areas	Ock, concrete, etc.) IN/A Location shown on site map Bulges not evident Height Met areas/water damage not evident Location shown on site map Areal extent
	Alternative Cover (armored r Remarks Bulges Areal extent Remarks Wet Areas/Water Damage Wet areas Ponding	Ock, concrete, etc.) IN/A Location shown on site map Bulges not evident Height Met areas/water damage not evident Location shown on site map Areal extent Location shown on site map Areal extent
	Alternative Cover (armored r Remarks Bulges Areal extent Remarks Wet Areas/Water Damage Wet areas	Ock, concrete, etc.) IN/A Location shown on site map Bulges not evident Height Met areas/water damage not evident Location shown on site map Areal extent

9.	Slope Instability Slides Location shown on site map No evidence of slope instability Areal extent Remarks Same as a smade on points. Page
В.	Benches Applicable \square N/A (Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel)
1.	Flows Bypass Bench
2.	Bench Breached ☐ Location shown on site map ☐ N/A or okay Remarks
3.	Bench Overtopped ☐ Location shown on site map ☐ N/A or okay Remarks
C.	Letdown Channels Applicable N/A (Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)
1.	Settlement
2.	Material Degradation ☐ Location shown on site map ☐ No evidence of degradation Material type Areal extent Remarks
3.	Erosion ☐ Location shown on site map ☐ No evidence of erosion Areal extent ☐ Depth ☐ Remarks ☐

4.	Undercutting
5.	Obstructions TypeNo obstructions Location shown on site map Areal extent Size Remarks
6.	Excessive Vegetative Growth No evidence of excessive growth Vegetation in channels does not obstruct flow Location shown on site map Areal extent Remarks
D. Cov	ver Penetrations Applicable
1.	Gas Vents ☐ Active ☐ Passive ☐ Properly secured locked☐ Functioning ☐ Routinely sampled ☐ Good condition ☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A Remarks
2.	Gas Monitoring Probes ☐ Properly secured/locked☐ Functioning ☐ Routinely sampled ☐ Good condition ☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A Remarks
3.	Monitoring Wells (within surface area of landfill) ☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition ☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A Remarks
4.	Leachate Extraction Wells ☐ Properly secured/locked☐ Functioning ☐ Routinely sampled ☐ Good condition ☐ Evicence of leakage at penetration ☐ Needs Maintenance ☐ N/A Remarks
5.	Settlement Monuments

- --

E.	Gas Collection and Treatmen	t Applicabl	e 🗆 N	J/A
1.	Gas Treatment Facilitie ☐ Flaring ☐ Good condition Remarks	☐ Thermal destruction ☐ Needs Maintenand	ce	Collection for reuse
2.	Gas Collection Wells, M Good condition Remarks	☐ Needs Maintenand		
3.	Gas Monitoring Facilitie ☐ Good condition Remarks	☐ Needs Maintenand	ce 🗹	
F.	Cover Drainage Layer	Applicab	ole 🗆 N	J/A
1.	Outlet Pipes Inspected Remarks	☐ Function		D/N/A
2.	Outlet Rock Inspected Remarks			₽Ń/A
G.	Detention/Sedimentation Por	ads	le 🗆	M/A
1.	Siltation Areal extent ☐ Siltation not evident Remarks		pth	C9/N/A
2.	Erosion Areal ex ☐ Erosion not evident Remarks			
3.	Outlet Works Remarks	<u> </u>	N/A	
4.	Dam Remarks	☐ Functioning ☐	Ń/A	

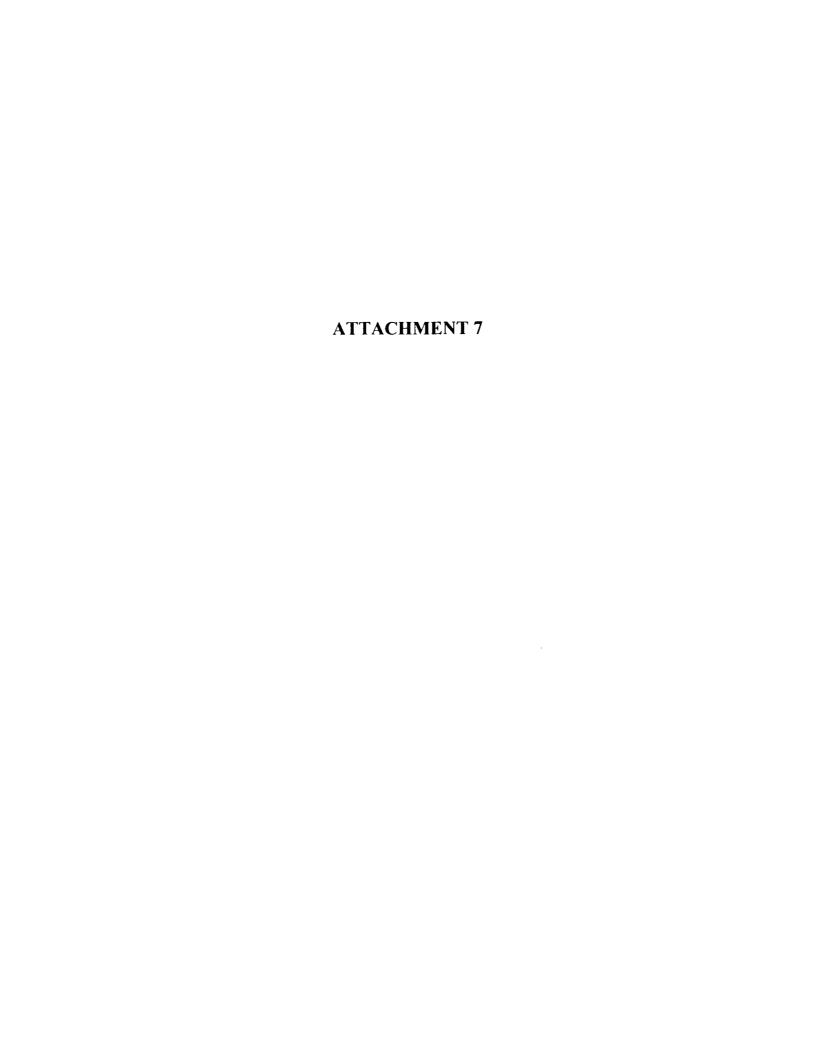
H. Re	taining Walls	☐ Applicable	☑ N/A	
1.	Deformations Horizortal displacement_ Rotational displacement_ Remarks			☐ Deformation not evident
2.	Degradation Remarks	☐ Location show	•	☐ Degradation not evident
I. Per	imeter Ditches/Off-Site Di	scharge	Applicable	□ N/A
1.	Siltation	Depth_		not evident
2.	Vegetative Growth Vegetation does not im Areal extent Remarks	pede flow Type	<u>.</u>	□ N/A
3.	Erosion Areal extent Remarks			☐ Erosion not evident
4.	Discharge Structure Remarks			
	VIII. VER	TICAL BARRIE	CR WALLS	Applicable □ N/A
1.	Settlement Areal extent Remarks			Settlement not evident
2.	Performance Monitoring Performance not monitoring Frequency Head differential Remarks	ored	•	

	IX. GROUNDWATER/SURFACE WATER REMEDIES (Applicable) N/A
A. G	roundwater Extraction Wells, Pumps, and Pipelines Applicable N/A
1.	Pumps, Wellhead Plumbing, and Electrical (ood condition All required wells properly operating) Needs Maintenance N/A Remarks
2.	Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances Ciood condition Needs Maintenance Remarks
3.	Spare Parts and Equipment E.eadily available Good condition Requires upgrade Needs to be provided Remarks
B. Su	rface Water Collection Structures, Pumps, and Pipelines Applicable (N/A)
1.	Collection Structures, Pumps, and Electrical Good condition Needs Maintenance Remarks
2.	Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances Good condition Needs Maintenance Remarks
3.	Spare Parts and Equipment Readily available Good condition Requires upgrade Needs to be provided Remarks

C.	Treatment System
1.	Treatment Train (Check components that apply) Metals removal
2.	Electrical Enclosures and Panels (properly rated and functional) N/A Good condition Needs Maintenance Remarks
3.	Tanks, Vaults, Storage Vessels □ N/A □ Good condition □ Proper secondary containment □ Needs Maintenance Remarks
4.	Discharge Structure and Appurtenances □ N:A □ Good condition □ Needs Maintenance Remarks
5.	Treatment Building(s) □ N A □ Good condition (esp. roof and doorways) □ Needs repair □ Chemicals and equipment properly stored Remarks
6.	Monitoring Wells (pump and treatment remedy) □ Properly secured/locked □ Functioning □ Routinely sampled □ Good condition □ All required wells located □ Needs Maintenance □ N/A Remarks
	Monitoring Data
1.	Monitoring Data ☐ Is routinely submitted on time ☐ Is of acceptable quality
2.	Monitoring data suggests: Groundwater plume is effectively contained Contaminant concentrations are declining

D. N	Ionitored Natural Attenuation
1.	Monitoring Wells (natural attenuation remedy) □ Properly secured/locked □ Functioning □ Routinely sampled □ Good condition □ All required wells located □ Needs Maintenance □ N/A Remarks
	X. OTHER REMEDIES
	If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.
	XI. OVERALL OBSERVATIONS
Α.	Implementation of the Remedy
	Describe issues and observations relating to whether the remedy is effective and functioning as designed Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.). [New Many 13 (many) 15 (many) 1
В.	Adequacy of O&M
	Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

C.	Early Indicators of Potential Remedy Problems
	Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future.
D.	Opportunities for Optimization
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.



Students to experience history

By Lindsey Hilly Natl Writer

IT abota East senior I filly Appelieller had the chance to most Proside (Elekt Barack Ohama and his family, she said she would family herself for ward, pen outstretched with th request. Here, can you sign my take?

Well, maybe, he wouldn't launch herselt the sent considering security at the Inaugura-tion will be tighter than spain

tion will be tighter than spair-dex on a hupper. But if she is esses him dur-ing her four of Asshington, De med week she said she could be thrilled. This looking orwant to it, and may be it is so Ohama. I would shake the hand of some thing, she said.

hast Senior hara Kirder. and she figures the croun of

Read all about it

Both Lilly Appelfeller and Kara Ruder will update area readers on their adventures in Washington, D.C. through daily blog updates and photo galleries at www.pulsejeurnal.com inauguration.

Their tour will include visits to historic monuments, museums and memorials as well as an informal inaugural

44 Liketa students won't even come close to the action Jan. 20 with the millions of spectators. "I want to see the (first).

kick from a distance, at least." she said. If figure there II be so much security it will be reficu-

hast history teachers Caro-len Smardon and Jenrafer Reid and this is their third Presi-dential Imagination, and they were able to get trickets through House Minority Loader John

Boehner's office. However, with the first black president taking office, this linauguration will be different, Smardon said.

With an average temperature close to freezing and the chance clase to freezing and the chaine of show and ram, she said will not be for the faint of heart as students stand outside for two hours with more than five mil-hou people. Although students ringht be for away from the innesse not

far away from the president, depending on where their tick-

ets place them in the crowd, Reid sand there will be prant televisions broadcasting the action and students may take broceidas. Voure there with this error room crowd of Americans with resong history and it's very clearie, she said "life still a halfiling concentrace even if thrilling experience, even if you're not in the front row."

Jessica R. Towhey, press ser-retary for Boehner's office, said

rotary for Bochners office, said because the congressman is on the fourt Congressmand Com-mittee on Inautural Corem-nues, he was given extra tickets to full requests. "We rotally made the effort to fulfill every request that came in trem our distract," she said "We had a lot of re-posts. This is a historic event that people are very interested in attenting." Contact this reporter at (513) 755-5067 or thirtyge nuclei com.

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www.lUnderstandMath.com

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 Diagnostic tests based on the Ohio Achievement Test, I Understeand Match Learning Center has.
 Diagnostic tests based on the Olio Achies ement Tes
 Fun activities which focus on concepts.
 Founder Pam Gemen has
 a PhiD, in math education,
 over 20 years teaching experience,
 over 12 years teaching experience,
 over 12 years experience writing math materials for
 major publishers.

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Parents, staff weigh options for curriculum

By Lindsey Hi ty Staff Writer

Several headred Lakota residents an 1-tail members attended a mathematics open house at Liber y Early Child-hood School or Iucestay. Jan. 13 to weightin on what curriculum should be used dis-tractioned. Each building and some-times each to a her has chosen

nach building and some-times each trailer has chosen which math curriculum to use in the past. With the imple-mentation of a new unified program, studints will see an in mass trailers. an increased a gubrate focus and a shift in the way they are

The materials will aben to the currently of unusus," said Lon Stettler a sistant super-intendent of elimentary edu-

valien
No matter which building
a stodent after ds, ne or she

will receive math up to Lakota standards, which he said will be higher than state stan-

"! Think it was an essential "I think it was an essential piece of the process, because it allowed as to hour of past experiences ways we can improve our moth curriculum, and learn what simportant to parents in the math curriculum. Said distinct spelies womant Laura Aussman." This is a really big decision for the distinct.

The "alls choice for gradlesseem and eight is chemose."

seven and eight is Glencoe's Math Connects Math Scape Courses 2-3 For the young-or grades, there is Pear-sen's Investigations in Number, Data and Space 2 and Everyday Mathematics in by

Which Group
After compiling parent
suggestions a committee of
administrators will make a rec-

ommendation to the Student ommendation to the Student success Commutee, which will send a formal proposal to Superintendent Mike Taelor. The goal is for the board to approve the program in time to get materials to teachers.

loaget materials to teachers this spring. Investigations has a three-prong approach, with text-book, negari-based learning and investigation. Tack Home the Tack Home of the Wright Group said his program is assessment driven, so parents and teachers know exactly where a third large on the path to a hieving state standards With a continual progression of topics, he said students will of topics, he said students will see the same lessons repeat-ed in increasing difficulty and the same games and exercis-es. There are student journals, online references, tutorials for parents and an interactive audio component for visual or

od of teaching has been devel-oped from three decades of research and application that is reacher friendly and structured teaching students to think differently about math

think differently about math, be said.

"The goal is that each child in the classroom is comfort-able sceing a problem they've never seen before and know-ing ways to attack it." he said.

Lakota school news. issues pulsejournal.com/



Re Richard O + nes Staff Writer

Season eight of American Hell, the popular sing-ing competition, began at 8 pm. Tuesdey, Jan. 13. on For, and I ns of the



Ryan Johnsor Makes it According to his agreement with the producers and the Fox to even in relative to the media intil he is chimnated or wins the compitation.

petition.

But is up to a list to the hand say that Johnson traveled to a alterna last fall. for taping aft it winning a local competition and a regional audition in Louis-

ville.
Also Internet's pooler of sites are reporting that Johnson has a the ast made in to the Lip of portrogness. Audition is units will be breachess through Jan 29. Hollywood reunds will be breachess through Feb 11. Line breach asts with season right (in, bists begin Feb 18. Log Ly, "American").

Feb. 18. L. cally, "American Idal" is broaccast at 8 p.m. on WXIX-I V

For more information on Johnson, visit Insterens Web site at view instereo-band com

Contact this replimer at (513) 520-7158 or none lat disblic Com

urnal.com /events





EPA Begins Review of Skinner Landfill Superfund Site West Chester, Ohio

Call Us 513-755-6556 Today

Leas unester, Ohio
Lea Sevenmental Protection Agency is conducting weaker to year of the Bence Lead of Country Country in the received of the Agency is conducted to the received of the termination of the Agency Charles of Country Country

A luminitial in a memorant fixed to the factor for the factor and the factor for the factor factor for the factor factor

This is me in lar vervear, eview it Skinner Piecews were abre in 1999 and 2004. This restaud abe cumplered by Niaron 2009.

Vole inturnation is available at the Vilopletown Public Library System (West Chaster Branch In Inchination

The rive-year review is an appoint in you go to let 654 apput your convents in burnay ball releved at 604 (1564) 1.9 St. a.m. = 5 c.) or in weekdays Outrapi.

Susan Pastor Community Involvement Coordinator 312-353-1325 pastor.susan@epa.gov

Scott Hansen Remedial Project Manager 312-886-1999 hansen.scott@epa.gov





Groundwater-Waste Monitoring Summary

Skinner Landfill West Chester, Ohio

Piezometer ID		P-9R	P-10R	P-11R	P-12R	
Grade Elevation (feet)		760.12	761.87	760.39	750.11	
Bottom of Waste Elevation	(MSL-feet)	731.92	729.87	728.00	722.61	
Depth to Bottom of Was	te (feet)	28.20	32.00	32.39	27.50	Comments
Groundwater Elevation (ft):	22-Jan-07	747.70	739.52	734.04	721.24	BASELINE
	02-Mar-07	748.03	740.60	735.68	718.17	1rst Q 2007
	11-Jun-07	746.34	751.34*	737.08	716.70	2nd Q 2007
	04-Sep-07	736.49	737.73	733.49	712.61	3rd Q 2007
	17-Dec-07	745.36	736.92	731.13	714.31	4th Q 2007
	10-Mar-08	747.61	739.04	733.71	717.42	1st Q 2008
	02-Jun-08	748.06	740.44	739.15	719.10	2nd Q 2008
	16-Sep-08	743.09	738.64	735.98	714.85	3rd Q 2008

Notes:

Bottom-of-Waste elevations determined during installation of new piezometers from 12/6/06 through 12/11/06. Shaded cells indicate water level elevations below the elevation of waste.

^{*} Groundwater Elevation suspect.

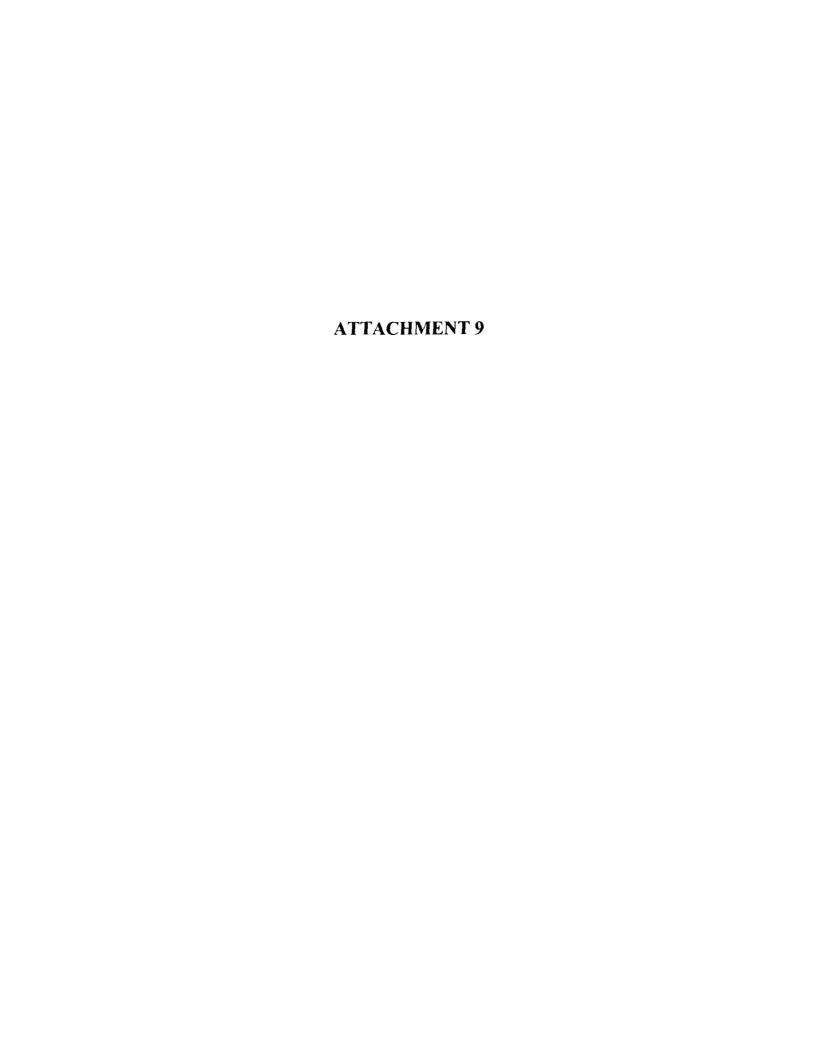


Table 4

Skinner Landfill West Chester, Ohio Second Quarter 2004

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
SW-50	-			-
SW-51	-		<u> </u>	-
SW-52	-		-	-
SWD-1	*	*	*	*
SWD-2	*	*	*	*
SWD-3	-	-	•	-

⁻ all parameters below report limits

italic - above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume.
- ** Dissolved metals for analytes that have a corresponding trigger level.

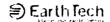


Table 4
Surface Water Summary

Skinner Landfill West Chester, Ohio Third Quarter 2004

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
SW-50	-	-	-	-
SW-51	-	-		-
SW-52	-	-	-	-
SWD-1	*	*	*	*
SWD-2	*	*	*	*
SWD-3	*	*	*	*

- all parameters below report limits

italic - above Contract Required Quantitation Levels (CRQL's)

- * Insufficier t sample volume.
- ** Dissolved metals for analytes that have a corresponding trigger level.

Surface Water Summary

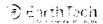
Skinner Landfill West Chester, Ohio Fourth Quarter 2004

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
SW-50	-	-	arsenic, selenium	-
SW-51	-	-	arsenic	-
SW-52	-	-	arsenic	-
SWD-1	+	*	*	*
SWD-2	•	-	arsenic	-
SWD-3	•	-	arsenic, zinc	-

- all parameters below report limits

italic - above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume.
- ** Dissolved metals for analytes that have a corresponding trigger level.



Surface Water Summary

Skinner Landfill West Chester, Ohio First Quarter 2005

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
SW-50	-	-	- · · · · · · · · · · · · · · · · · · ·	-
SW-51	•	-		-
SW-52	<u>-</u>	-	arsenic	
SWD-1	*	*	*	•
SWD-2	*	*	*	*
SWD-3	•	-	-	-

- all parameters below report limits

italic - above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume.
- ** Dissolved metals for analytes that have a corresponding trigger level.

Surface Water Summary

Skinner Landfill West Chester, Ohio Second Quarter 2005

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/P'CBs
SW-50	-	-	-	-
SW-51	-	-	chromium	-
SW-52	-	-	-	-
SWD-1	*	*	*	*
SWD-2	*	*	*	*
SWD-3	*	*	*	*

⁻ all parameters below report limits

italic - above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume.
- ** Dissolved metals for analytes that have a corresponding trigger level.



Table 4

Skinner Landfill West Chester, Ohio Third Quarter 2005

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/F'CBs
SW-50	-	-	-	-
SW-51	-	-	-	-
SW-52	-	-	-	-
SWD-1	*	*	*	*
SWD-2	*	*	*	*
SWD-3	*	*	*	*

⁻ all parameters below report limits

italic - above Contra 1 Required Quantitation Levels (CRQL's)

- * Insufficient sample volume.
- ** Dissolved metals for analytes that have a corresponding trigger level.

Table 4

Skinner Landfill West Chester, Ohio Fourth Quarter 2005

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
SW-50	-	- 1	•	-
SW-51	-	-	-	-
SW-52	-	-	-	-
SWD-1	*	*	*	*
SWD-2	*	*	*	*
SWD-3	-	-		

⁻ all parameters below report limits

italic - above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume.
- ** Dissolved metals: for analytes that have a corresponding trigger level.



Surface Water Summary

Skinner Landfill West Chester, Ohio First Quarter 2006

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
SW-50	-	-	-	-
SW-51	_	-	-	-
SW-52:	-	-	-	-
SWD-1	-	-	Zinc	
SWD-2	-	-	Zinc	-
SWD-3	-	-	-	-

- all parameters below report limits

italic - above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample vo ume.
- ** Dissolved metals for analytes that have a corresponding trigger level.



Surface Water Summary

Skinner Landfill West Chester, Ohio Second Quarter 2006

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
SW-50	-	-	-	-
SW-51	-	-	-	-
SW-52	-	-	<u>-</u>	
SWD-1	*	*	*	*
SWD-2	*	*	*	*
SWD-3	*	*	*	*

- all parameters below report limits

italic - above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume.
- ** Dissolved metals for analytes that have a corresponding trigger level.



Skinner Landfill West Chester, Ohio Third Quarter 2006

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
SW-50	-	-	Zinc	-
SW-51	-	-	-	-
SW-52:	-	-	-	-
SWD-1	*	*	*	*
SWD-2	*	*	*	*
SWD-3	-	-	Zinc	-

⁻ all parameters below report limits

italic - above Contract Required Quantitation Levels (CRQL's)

- * Ins ifficient sample volume.
- ** Dissolved metals for analytes that have a corresponding trigger level.

Table 4

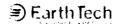
Skinner Landfill West Chester, Ohio Fourth Quarter 2006

Sample ID	VO Cs	SVOCs	Dissolved Metals**	Pesticides/PCBs
SW-5(SW-51	-	-	-	-
SW-51	_	-	-	-
SW-52	•	-	•	-
SWD-1	*	*	*	*
SWD-2	*	*	*	*
SWD-3	-	-	-	-

⁻ all parameters below report limits

italic - above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume.
- ** Dissolved metals for analytes that have a corresponding trigger level.



Surface Water Test Results Summary

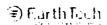
Skinner Landfill West Chester, Ohio First Quarter 2007

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
S-W-50	-	-		-
SW-51	-	-		-
W-52	-	-	-	-
WD-1	*	*	*	*
WD-2	-	-	-	-
WD-3	_	-	-	-

all parameters below report limits

i'alic - above Contrac' Required Quantitation Levels (CRQL's)

- * Insufficient sample volume.
- ** Dissolved metals for analytes that have a corresponding trigger level.



Surface Water Test Results Summary

Skinner Landfill West Chester, Ohio Second Quarter 2007

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
S'W-50	-	-	-	-
S'W-51	_	-	-	-
S'V-52	-	-	-	<u> </u>
SWD-1	*	*	*	*
SVD-2	*	*	*	*
SVD-3	-	-	-	-

⁻ all parameters below report limits

itclic - above Contract Required Quantitation Levels (CRQL's)

- * · Insufficient sample volume.
- ** Dissolved metals for analytes that have a corresponding trigger level.



Surface Water Test Results Summary

Skinner Landfill West Chester, Ohio Third Quarter 2007

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
SW-50				
SW-51				
SW-52	_			
SWD-1	*	*	*	*
SWD-2	*	*	*	*
SWD-3	*	*	*	*

Notes:

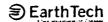
- : all parameters below report limits

italic: above Contract Required Quantitation Levels (CRQL's)

bold : above trigger level

*: Insufficient sample volume or location dry.

** : Dissolved metals for analytes that have a corresponding trigger level.



Surface Water Test Results Summary

Skinner Landfill West Chester, Ohio Fourth Quarter 2007

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
5W-50			-	
SW-51				_
SW-52				
5WD-1		_		
SWD-2				_
5WD-3			_	_

Notes:

--: all parameters below report limits

italic above Contract Required Quantitation Levels (CRQL's)

- *: Insufficient samp e volume or location dry.
- ** : Dissolved metals for analytes that have a corresponding trigger level.



Surface Water Test Results Summary

Skinner Landfill West Chester, Ohio First Quarter 2008

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
S W-50				
SW-51		_		— <u> </u>
SW-52		_	-	
SWD-1			Zinc	
SWD-2		_		
SWD-3		_		

Notes:

--: all parameters below report limits

valic: above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume or location dry.
- **: Dissolved metals for analytes that have a corresponding trigger level.



Surface Water Test Results Summary

Skinner Landfill West Chester, Ohio Second Quarter 2008

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
SW-50		_		
SW-51				_
SW-52			Zinc	
SWD-1		_	Zinc	-
SWD-2	_	Acenaphthene 2,4-Dimethylphenol Fluoranthene Naphthalene Phenanthrene Phenol		_
SWD-3		_	_	

Notes:

-- all parameters below report limits

italic : above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume or location dry
- ** Dissolved metals for analytes that have a corresponding trigger level



Surface Water Test Results Summary

Skinner Landfill West Chester, Ohio Third Quarter 2008

Sample iD	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
SW-50		_		<u> </u>
SW-51	<u> </u>			
SW-52			Lead	
SWD-1	*	*	*	*
SWD-2	*	*	*	*
SWD-3	*	*	*	*

Notes:

-: all parameters below report limits

italic: above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume or location dry.
- ** Dissolved metals for analytes that have a corresponding trigger level.

ATTACHMENT 10

Table 3

Skinner Landfill West Chester, Ohio Second Quarter 2004

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
GW-06R	-	-	iron	-
GW-07R	-	-	-	-
GW-58	not sampled	not sampled	not sampled	not sampled
GW-59	-	•	-	-
GW-60	-	-	-	-
GW-61	-	•	iron	
GW-62A	-	-	-	
GW-62B	benzene	*	*	*
GW-63	-	-	iron	<u> </u>
GW-64	-	-	-	<u> </u>
GW-65	-	-	*	*

- all parameters below report limits

italic - above Contract Required Quantitation Levels (CRQL's)

bold - above trigger level

- * Insufficient sample volume.
- ** Dissolved metals for analytes that have a corresponding trigger level.

GW-58 not sampled due to wasp nest in standpipe.

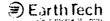


Table 3

Groundwater Summary

Skinner Landfill

West Chester, Ohio Third Quarter 2004

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
GW-06R	-	-	barium	-
GW-07R	-	-	-	-
GW-58	*	*	*	*
GW-59	•	-		-
GW-60	*	*	*	*
GW-61	-	-	iron	-
GW-62A	•	-	-	-
GW-62B	*	*	*	*
GW-63	-	-	iron	-
GW-64	•	-	-	-
GW-65	*	*	*	*

- all parameters below report limits

italic - above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume.
- ** Dissolved metals for analytes that have a corresponding trigger level.



Skinner Landfill West Chester, Ohio Fourth Quarter 2004

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
GW-06R	-	-	arsenic, iron	-
GW-07R	-	-	arsenic, selenium	-
G\V-24	-	-	arsenic, iron	<u> </u>
G\V-26	-	-	arsenic, barium, selenium	-
G1V-30	-		arsenic, barium, iron	-
G\V-58	-	-	arsenic, iron, selenium	-
G\V-59	-		arsenic	-
G\V-60	-	-	arsenic, selenium	-
GW-61	-	-	arsenic, iron	-
G\V-62A	-	-	arsenic	-
G1V-62B		-	*	*
GW-63	-	-	arsenic, iron, selenium	-
G1V-64	-	-	arsenic	•
G\V-65	-	*	*	*

- all parameters below report limits

italic - above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume.
- ** Dissolved metals for analytes that have a corresponding trigger level.



Table 3

Skinner Landfill West Chester, Ohio First Quarter 2005

Sariple ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
GW'-06R			-	
GW'-07R	-	-	-	-
GW-58	-		-	-
GW'-59	-	-	-	-
GW'-60	-	-	-	-
GW'-61	-	-	arsenic	-
GW-62A	-	-	iron	-
GW-62B	-	*	*	
G W -63	-	-	arsenic, iron	-
GW -64	-	-	-	-
GW -65	*	*	+	+

- al parameters below report limits

italic - above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume.
- ** Dissolved metals for analytes that have a corresponding trigger level.

Table 3

Skinner Landfill West Chester, Ohio Second Quarter 2005

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
GW-06R	-	-	-	-
GW-07R	•	T	chromium	<u> </u>
GW-58	-	-	-	-
GW-59		-		
GW-60		-	·	
GW-61	-	-	iron	-
GW-62A		-	-	
GW-62B	-	*	*	*
GW-63			iron	
GW-64	-	-		
GW-65	*	*	*	*

- al parameters below report limits

itali: - above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume.
- ** Dissolved metals for analytes that have a corresponding trigger level.

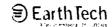


Table 3

Skinner Landfill West Chester, Ohio Third Quarter 2005

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
GW-06R	-	-	bari um	-
GW-07R	-	*	*	*
3W-24	-	-	iron	
GW-26	-	-	barium, iron	
JW-30			barium, iron	
W-58	-	-		
W-59	-	-	• • • • • • • • • • • • • • • • • • •	-
GW-60	*	*	*	*
¿W-61	-	-	chromium, iron	
3W-62A	-			-
3W-62B	-	*	*	*
GW-63	-		iron, zinc	
GW-64	-	-	iron	-
W-65	-	*	*	*

⁻ all parameters below report limits

i'alic - above Contract Required Quantitation Levels (CRQL's)

- ' Insufficient sample volume.
- ** Dissolved metals for analytes that have a corresponding trigger level.

Table 3

Skinner Landfill West Chester, Ohio Fourth Quarter 2005

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
G'W-06R		, , , , , , , , , , , , , , , , , , ,	-	-
GW-07R	-	*	*	*
G W-58		-		
G W-59	·	-		
GW-60	-	*	*	*
GW-61	*	*	*	*
GW-62A	· ·	-		-
GW-62B	*	*	*	*
GW-63		-	Iron	-
GW-64		-		
GW-65	*	*	*	*

⁻ all parameters below report limits

italic - above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume.
- * '- Dissolved metals for analytes that have a corresponding trigger level.

Table 3

Skinner Landfill West Chester, Ohio First Quarter 2006

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
G W-06R	-	-	-	
G W-07R	-		Iron	-
W-58			Barium, Iron, Mercury	-
W-59	-	-		
W-60	-	-	-	-
W-61	2-Butanone	-	lron	-
W-62A	-	-	*	-
W-62B	2-Butanone	-	*	*
W-63	-	-	-	
W-64	2-Butanone	-	-	
-W-65	-	*	*	*

- all parameters below report limits

italic - above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume.
- ** Dissolved metals for analytes that have a corresponding trigger level.

Table 3

Skinner Landfill West Chester, Ohio Second Quarter 2006

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
€ W-06R	-	-	Barium, Iron	-
G W-07R	-	-		
G W-58	-	-	Barium, Iron	-
(W-59		-		
C W-60	-	-	*	
GW-61	-	-	Iron	
C W-62A	-	-	-	-
(W-62B	*	*	*	*
C-W-63	-	-	Iron	-
C-W-64	-	-		-
GW-65	*	*	*	*

[·] all parameters below report limits

halic - above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume.
- ** Dissolved metals for analytes that have a corresponding trigger level.

Table 3

Groundwater Summary

Skinner Landfill West Chester, Ohio Third Quarter 2006

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
GW-06R	-	-	Barium, Iron	<u>-</u>
GW-07R	-	-	Iron, Cyanide (,)	
GW-58	-	-	Cyanide (;)	-
GW-59	-	-	-	-
GW-60	· _	-	*	*
GW-61	-		Iron	-
GW-62A		-	-	
GW-62B		*	*	*
GW-63	-	-	Iron	-
GW-64	-	-	Cyanide (;)	-
GW-65	-	-	*	-
GW-24	-	-	Iron	
GW-26		-	Barium, Iron	
GW-30		-	Barium, Iron	-

- all parameters below report limits
static - above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume.

 ** Dissolved me als for analytes that have a corresponding trigger level.
- 11, Total Cyanide

Table 3

Skinner Landfill West Chester, Ohio Fourth Quarter 2006

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs		
GW-06R			Barium, Iron			
GW-07R	-		Iron			
GW-58		-				
GW-59	<u> </u>	_				
GW-60			<u> </u>			
GW-61		-	Iron			
GW-62A			· · · · · · · · · · · · · · · · · · ·			
GW-62B	*	*	•	•		
GW-63	-	-	Iron	-		
GW-64			<u> </u>			
GW-65		*				
GW-24	Monitoring Well Outside Fenced area sampled annually (not sampled this quarter)					
GW-26	N	fonitoring Well Outside Fer	nced area sampled annually (not sampled t	his quarter)		
GW-30		Ionitoring Well Outside Fer	nced area sampled annually (not sampled t	his quarter)		

Groundwater Test Results Summary

Skinner Landfill West Chester, Ohio First Quarter 2007

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
G\V-06R		-	Barium, Iron	
G\V-07R		-	Iron	-
G\V-58		<u> </u>	Barium, Iron	
G\V-59		-	-	<u> </u>
G\V-60	-	-		-
G\V-61		-	Iron	
GW-62A		-		-
GW-62B	*	*	*	*
G'V-63	-	_	<u>-</u>	
GW-64		_	-	-
G\V-65	-	*	*	*
G'V-24			Iron	<u> </u>
G'V-26	-		Barium	-
G¹₹-30		-	<i>Iṛon</i>	

⁻ all parameters below report limits

italic - above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume.
- ** Dissolved metals for analytes that have a corresponding trigger level.
- 1 The concentration of Cyanide has been reported from the total fraction because the CLP SOW ILM04.0 only specifies for the analysis of Total Cyanide.

Groundwater Test Results Summary

Skinner Landfill West Chester, Ohio Second Quarter 2007

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs				
GW-06R	-	-	Barium, Iron					
GW-07R	-	-	<u>-</u>					
GW-58	<u> </u>	-	Zinc	-				
GW-59	_	-	Iron	-				
GW-60	-	-	*	*				
GW-61	-	-	Zinc	-				
GW-62A		-	Zinc	-				
GW-62B	*	*	*	*				
GW-63	-	-	Iron	-				
GW-64	-	-	-	-				
GW-65		-	*	*				
GW-24	N	Monitoring Well Outside Fenced area sampled annually (not sampled this quarter)						
GW-26	N	Ionitoring Well Outside F	enced area sampled annually (not sample	d this quarter)				
GW-30	į v	lonitoring Well Outside F	enced area sampled annually (not sampled	Monitoring Well Outside Fenced area sampled annually (not sampled this quarter)				

- all parameters below report limits

italic - above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume
- ** Dissolved metals for analytes that have a corresponding trigger level



Groundwater Test Results Summary

Skinner Landfill West Chester, Ohio Third Quarter 2007

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs		
GW-06R		_	Barium, Iron			
GW-07R		*	*	*		
GW-58						
GW-59	_	_	_	_		
GW-60	*	*	*	*		
GW-61						
GW-62A			Iron	_		
GW-62B	*	*	*	*		
GW-63		_	Cyanide (1)			
GW-64	_	_	_	_		
GW-65	*	*	*	*		
GW-24		Monitoring Well Outside Fenced area sampled annually (not sampled this quarter)				
GW-26	, ,	Monitoring Well Outside	Fenced area sampled annually (not samp	led this quarter)		
GW-30		Monitoring Well Outside	Fenced area sampled annually (not samp	led this quarter)		

Notes:

all parameters below report limits

italic: above Contract Required Quantitation Levels (CRQL's)

bold : above trigge : level

- * . Insufficient sample volume or location dry
- ** Dissolved metals for analytes that have a corresponding trigger level

11 Total Cyanide

Groundwater Test Results Summary

Skinner Landfill West Chester, Ohio Fourth Quarter 2007

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs		
GW-06R			Iron			
GW-07R		_	Iron			
GW-58						
GW-59						
GW-60		_				
GW-61		_	Iron			
GW-62.A	_	_	Iron			
GW-62B		_	*			
GW-63			_			
GW-64	_	_				
GW-65			*			
W-24	N	Monitoring Well Outside Fenced area sampled annually (not sampled this quarter)				
W-26		Monitoring Well Outside Fenced area sampled annually (not sampled this quarter)				
GW-30	Monitoring Well Outside Fenced area sampled annually (not sampled this quarter)					

Notes:

— all parameters below report limits

italic . above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume or location dry.
- ** Dissolved metals for analytes that have a corresponding trigger level

⁽¹⁾ Total Cyanide

Groundwater Test Results Summary

Skinner Landfill West Chester, Ohio First Quarter 2008

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs
GW-06R				
GW-07R				
G½-58		_		
GW-59			Zinc	
GW-60		_		
GW-61		<u>-</u>		
GW-62A				
GW-62B			Zinc	
GW-63				
G1V-64	_		<u></u>	
G1V-65			Iron	
GW-24 (Perimeter Well)	_		Iron	
GW-26 (Perimeter Well)		bis(2-ethylhexyl)phthalate	Barium	
GW-30 (Perimeter Well)	_	_	Iron	_

Notes:

-- all parameters below report limits

italic: above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume or location dry
- ** Dissolved metals for analytes that have a corresponding trigger level
- 11 Total Cyanide.

Groundwater Test Results Summary

Skinner Landfill West Chester, Ohio Second Quarter 2008

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs		
GW-06R	_	_	Barium, Iron			
GW-07R		bis(2-ethylhexyl)phthalate	<u> </u>			
GW-58						
GW-59		_				
GW-60		bis(2-ethylhexyl)phthalate				
GW-61		-	Iron, Lead, Zinc			
GW-62A			<u> </u>			
GW-62B		_	Lead, Zinc	==		
GW-63			Iron			
G W-64		_	Lead			
G W-65	-					
GW-24 (Perimeter Well)		Monitoring Well Outside Fenced a	area sampled annually (not sampled th	nis quarter)		
G W-26 (Perimeter Well)		Monitoring Well Outside Fenced area sampled annually (not sampled this quarter)				
GW-30 (Perimeter Well)		Monitoring Well Outside Fenced area sampled annually (not sampled this quarter)				

Notes:

--: all parameters below report limits

italic: above Contract Fequired Quantitation Levels (CRQL's)

bold: above trigger level

* Insufficient sample volume or location dry.

** Dissolved metals for analytes that have a corresponding trigger level



Groundwater Test Results Summary

Skinner Landfill West Chester, Ohio Third Quarter 2008

Sample ID	VOCs	SVOCs	Dissolved Metals**	Pesticides/PCBs		
G'w-06R						
G'w-07R			Iron			
G'W-58	_					
G`W-59	_					
G' <i>W-</i> 60	*	*	*	*		
G'W-61	-					
G\W-62A						
G\V-62B			Iron and Zinc			
G'W-63	_	_				
G' <i>N</i> -64						
G` <i>N</i> -65	*	*	*	*		
G'N-24 (Perimeter Well)		Monitoring Well Outside Fenced area sampled annually (not sampled this quarter)				
G'V-26 (Perimeter Well)		Monitoring Well Outside Fenced area sampled annually (not sampled this quarter)				
GV-30 (Perimeter Well)		Monitoring Well Outside Fen	ced area sampled annually (not sampled the	nis quarter)		

No tes:

-- all parameters below report limits

italic: above Contract Required Quantitation Levels (CRQL's)

- * Insufficient sample volume or location dry.
- ** Dissolved metals for analytes that have a corresponding trigger level